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No. 1.

## ORIGINAL ARTICLES.

### THE TREATMENT OF FIBROID TUMORS OF THE UTERUS BY GALVANISM: WITH CASES.

*Read in the Section on Obstetrics and Diseases of Women, at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, Ohio, May, 1888.*

BY FRANKLIN H. MARTIN, M.D.,

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Before this Section at the St. Louis meeting two years ago, I read a paper on the value of galvanism in gynecology, and among other cases reported three of fibroid tumor of the uterus treated by the method. In December of the same year, 1886, I read a paper before the Chicago Medical Society, describing Dr. Apostoli's method of treating these difficulties; and before the Section of Gynecology at the Ninth International Medical Congress, I read a paper on "A Method of Treatment of Fibroid Tumors of the Uterus by Apostoli's Method, based upon Exact Dosage;" and I now ask you to bear with me while I report a few cases of the many of fibroid tumors of the uterus treated by the latter method, which have come under my observation, and give you the benefit of conclusions arrived at as the result of this experience.

In the treatment of fibroid tumors of the uterus by Apostoli's method, I have made some changes in the way of electrodes and other apparatus. Instead of the inconvenient biscuit of clay used by Dr. Apostoli for the external electrode I employed the animal membrane abdominal electrode.<sup>1</sup> By the adoption of flexible intra-uterine electrodes I am able to do away almost entirely with the vaginal galvano-puncture of Apostoli's, and by a system of internal concentration a more exact system of dosage has been made possible. Of these internal flexible concentration electrodes I have confined myself so far to two sizes—one of an active surface of 2 sq. cm., the other of 4 sq. cm. The first of these, (the 2 sq. cm.), I have determined by experiment, requires a 50 milli-

ampère current; the second, (the 4 sq. cm.), requires a 100 ma. current, in order to get the characteristic effect over that extent of surface sufficient to check hæmorrhage. It can readily be understood how, with accurate adjustment of the electrodes a given effect can always be obtained with a given current, and by attacking different portions of the mucous membrane at different sittings, the characteristic effect of the current can be accomplished with greater certainty over all the surface, and with less discomfort to the patient, than when an electrode filling the entire canal is employed, the extent of surface disregarded, and the current simply regulated by the sensations of the patient. Then, too, these internal electrodes being constructed with a special idea of flexibility, renders it possible to reach the entire inner surface of any uterine canal, no matter how tortuous it may be, rendering it unnecessary in a greater number of cases to employ the more or less dangerous puncture. From Jan. 1, 1887 to Jan. 1, 1888, I applied galvanism in strong, accurately measured and definitely concentrated doses, in gynecological cases over 1,400 times. I employed it during this time to fibroids of the uterus 623 times in fifteen cases. The result was as follows:

Found not suitable for treatment and recommended for operation, 1; Benefited and still under treatment, 4; Absolutely cured, 5; Symptomatically cured, 5.

*Case 1.—Diagnosis: large, painful, hæmorrhagic, interstitial and subperitoneal fibroid tumor, filling the pelvis and extending nearly to umbilicus. Treatment: A large number of applications of galvanism, given by three different methods of procedure, extending over a period of over two years. Result: Benefited.*

The first case I have to report is a continuation of the history, cited as *Case 10*, in an article read by me before the Section of Obstetrics and Diseases of Women, at the thirty-seventh annual meeting of the American Medical Association, at St. Louis, May 5, 1886.

Miss C., unmarried, æt. 26, consulted me on account of abdominal tumor. She had previously obtained the advice of a homœopathic physician, who had Dr. Ludlam, of Chicago, see her, in consultation, and was pronounced by them in-

<sup>1</sup> These electrodes are illustrated and described in the Transactions of the Ninth International Medical Congress, and in the N. Y. Medical Record, Dec. 17, 1887.

curable. Upon examination I found a large abdominal tumor attached, as I then thought to the whole anterior wall of the uterus, crowding that organ away from the bladder. I have since ascertained that the portion previously diagnosed as the uterus is simply the cervix, the uterus being lost in the mass of the tumor, and its canal traversing its entire depth. The tumor was ovoid, smooth, and easily movable under the abdominal walls, about seven inches in its long and six inches in its transverse diameter. It was growing rapidly when she came to me, but an operation for its removal by abdominal section was refused. I therefore, with the idea of preventing further growth, if possible, and of checking the hæmorrhage, gave her iodine and ergot treatment. After a lull in this treatment and considerable progress in the growth of the tumor, at the patient's request galvanism was commenced.

A uterine bulb electrode was introduced into the cervix, or a vaginal ball electrode was pressed firmly against the tumor where it rested against the anterior wall of the vagina, while a large hand sponge electrode was applied over the tumor on the abdominal wall. From 15 to 20 milliampères were borne by the patient at each séance, each of from fifteen to twenty minutes in length. The treatment was repeated

every second day for about two months, when, the progress in its growth was checked, the tumor was reduced in size. The treatment, for unavoidable reasons was discontinued for a month, when the tumor made rapid progress in growth. The galvanism was again commenced and continued for about two months, with still further diminution in the size of the tumor. At this time the case was reported as already stated. In my report at that time, not being so familiar with Dr. Apostoli's methods as now, I said: "This case would have made much better progress if the treatment had been given every day instead of every second day, or I think galvano-puncture would give better satisfaction."

In September, 1886, the patient being impatient for rapid improvement, I advised and instituted the more radical treatment of abdominal galvano-puncture. With the assistance of Dr. E. L. Hollister, of Chicago, four operations were performed in intervals of ten days. The patient was anæsthetized, and a steel needle 4 mm. in diameter with a trocar point, insulated with hard rubber to within 3 cm. of the point, attached to the negative pole of the battery, was thrust through the abdominal wall into the thickest portion of the tumor. A large animal-membrane electrode was placed upon the abdomen in close proximity, and attached to the positive pole of the battery. A current of 200 ma. was turned on and allowed to pass for fifteen minutes. The

effect of these operations was a rapid diminution in the size of the tumor. The patient was then advised to rest and await further developments.

At the end of two months she returned, stating that the growth of the tumor had recommenced, the hæmorrhage being excessive. Dreading the necessary risk attendant upon abdominal puncture, and having at this time successfully treated a number of cases by Dr. Apostoli's method, I determined to adopt that safer, and, in my opinion, much more effective means. Therefore, in January, 1887, regular treatment was begun, consisting of the introduction of a plain Apostoli intra-uterine platinum electrode to the bottom of the uterus, which at this time measured  $18\frac{1}{2}$  cm. or seven inches in depth. To this electrode was attached the negative pole of the battery, and the circuit was completed by the use of the animal membrane electrode. Seven treatments were given before the first of February, when menstruation appeared. The first four of these treatments were of the negative intra-uterine, the last three of the positive intra-uterine. The strongest current borne by the patient was 50 ma. The menstruation following was painless, but the hæmorrhage was as excessive as ever. No change in tumor.

In *February* the patient received but four treatments; all negative intra-uterine. No apparent result on tumor or amount of flow, still no pain at menstruation.

*March*, two treatments only were given, both intra-uterine negative of about 50 ma. strength. The amount of flow this month caused considerable exhaustion, but no pain. No apparent change in tumor.

*April*, eight positive intra-uterine applications were made, with a view if possible of modifying next flow. The patient was able to tolerate without discomfort a 100 ma. current. Menstruation was not materially modified, notwithstanding the strong current and the positive pole. Tumor, however, shows signs of reduction. Uterus measures 16 cm.

I became convinced at this time that the current borne by the patient was not sufficiently strong to produce the desired coagulating effect upon the whole surface in contact with the long internal platinum electrode. The current, in other words, was not sufficiently concentrated at any one point of the comparatively large surface of the platinum to produce its characteristic coagulating effect necessary to check hæmorrhage. I, therefore, at this point, adopted my concentration electrodes. The one constructed for this case, was 3 mm. in diameter, and had an active surface of 4 sq. cm. The current this surface required was the maximum the patient had been able to tolerate, 100 ma.

*May*, five positive intra-uterine applications were given with the new electrode. At the first

application the active portion of the electrode, the distal end, was introduced to the bottom of the canal and the necessary current, as indicated by the milliamperè metre, was turned on and allowed to act for five minutes. A gauge on the staff of the sound marked the distance to which the instrument entered the womb. At the next treatment this gauge was placed so that the active portion of the electrode would just reach the point acted upon at the previous treatment. This same principle was carried out until every portion of the canal had been treated by the concentrated current. Five treatments were given before menstruation. The effect was marvelous. The flow continued but three days instead of eight, as before, and the amount was barely a show; no pain.

*June*, four intra-uterine negative treatments early in the month were given with the concentration electrode, when the patient left the city for three weeks.

*July*, thirteen intra-uterine treatments were given. The first six negative, followed by seven positive. Tumor decreasing in size. Depth of uterus 15 cm. No pain at menstruation and otherwise normal, lasting four days.

*August*, five treatments, negative.

*September*, six treatments; two negative, four positive. Measurements of the abdomen were made at this time over the most prominent portion of the tumor; the measurement was 37½ inches.

*October*, six treatments, all negative intra-uterine. Menstruation still remains scanty. Patient gaining in flesh and improving in general health.

*November*, nine treatments, three before menstruation and six following, all negative intra-uterine. Patient improving in general health, menstruation more natural, no pain at any time. Old neuralgia entirely disappeared. Patient walks about the city and enjoys perfect health, except some little difficulty in the bladder; desires to urinate frequently.

*December*, five intra-uterine negative treatments. Although patient has gained in flesh since measurement was made, October 19th, she is two inches smaller, or 35½ inches at the same point. Depth of uterus 14 cm. or 5½ inches.

Thus this patient has in one year gained in flesh, in strength, has normal menstruation instead of menorrhagia, is perfectly free from pain. The uterus has been reduced from 7 to 5½ inches in depth, and the mass of the tumor is reduced fully one-third in size.

*January 1, 1888*, patient still under treatment.

*Case 2.—Diagnosis: Bleeding, painful, myofibroma of the uterus. Treatment: Thirty-two applications of galvanism. Result: Cure.*

Mrs. D., æt. 24, married two years, no children, no miscarriages. Puberty at 14. Menstruation irregular and profuse, lasting five or six days. Headaches severely at menstruation and severe

neuralgic pains of the pelvis following. Bowels constipated, hemorrhoids, leucorrhœa, frequent and painful urination. Local examination discloses small vagina, large patulous cervix, with uterus large and canal taking the direction parallel with the axis of the body, and measuring 11 cm., or a trifle more than 4 inches in depth. With sound in uterus and by bimanual manipulation there could be distinguished a thickening of the anterior wall of the fundus. The uterus in the rectal-abdominal examination appeared at least double its natural size, smooth and regular in contour, with a disproportionately enlarged fundus. Dr. Arvid H. Wimemark assisted me in a few of the treatments given this case.

The first twelve treatments received by this patient were after the unmodified Apostoli method, without any attempt at accurate concentration, and a current varying from 100 to 200 ma. in strength. Six intra-uterine galvano-negative treatments were given in the first fourteen days, followed by four galvano-positive treatments, one for every second day, in order to modify the amount of the approaching menstruation. Following the first menstruation two more of these applications were made, when I adopted the method of internal concentration before referred to, using the 4 sq. cm. surface with a 100 ma. current. Thirty of these treatments were afterwards employed; twenty-two of the galvano-negative and eight of the galvano-positive. The whole time of treatment extends over three months, including three menstrual periods.

The effect of the treatment was markedly noticed in the behavior of the first menstruation, the flow having been modified in quantity, and without the slightest pain. The second menstruation lasted but two days, was very scanty and entirely free from pain. The third menstruation lasted three days, was free from any annoyance, and the flow small in quantity, with no pain. The depth of the uterus had not markedly decreased, but was smaller in contour at the first menstruation. Before the next menstrual period the uterus measured 9 cm. and a marked decrease in the general size of the uterus was evident both to the touch and sight, viewed through a speculum. The third menstruation left the uterus 7 cm. in depth, normal in contour, with no evidence of a thickened fundus, no leucorrhœa. Dysuria and constipation had both disappeared.

The patient, who had previously been anæmic in appearance, is now quite full blooded and in the best of health. The weight had not been noted at the beginning of the treatment, so the exact gain could not be determined, it was estimated, however, at about fifteen pounds.

This is one of the few actual cures reported by this method of treatment, and I have no doubt that it will remain permanent.

The patient was one who never complained of

the strength of the current and never expressed any discomfort from its use. It acted as a tonic always, and she was capable of greater exertion and more work on the days of the treatment than on off days.

*Case 3.—Fibromyoma in anterior wall of uterus. Treatment, galvanism. Result, improvement in general health and slight reduction of the growth.*

Miss E., unmarried, 25 years of age, referred by Dr. Wm. Bell, of Benton Harbor, Mich. Menstruation commenced at the age of 13. The flow has never been scanty, at the same time not profuse, and rather irregular. Patient is not able to get about much at the menstrual period because of neuralgic pain and excessive nervousness.

Physical examination. Uterine axis lying in the direction of the axis of the body, with a depth of  $7\frac{1}{2}$  cm., or 3 inches. Upon the anterior wall, appearing to be attached to the uterus about its centre, is a well-defined growth of a hard, unyielding nature, approximating the following diameters: Anterior posterior diameter to uterine canal 8 cm., or  $3\frac{1}{4}$  inches; transverse diameter  $7\frac{1}{2}$  cm., or 3 inches. The growth is smooth, and the attachment, while broad, is somewhat pedicular.

This patient was sent to me, and treatment was commenced October 13, 1887. The treatment adopted at the beginning was very simple and did not prove very effective. A vaginal electrode, attached to the negative pole of the battery, was passed well up against the tumor as it rested on the anterior vaginal wall, and a large flat sponge electrode was applied over the growth upon the abdomen. A current of 20 to 30 milliampères was used according to the toleration of the patient with that variety of surface electrode. The patient received thirty-nine of these treatments in about forty-five days.

The menstruation was attended with much less pain and nervousness and lasted about four days. The interval between the beginning of the two menstrual periods was twenty-eight days. The growth had apparently reduced about one-fourth in size. The depth of the uterus remained the same as at the beginning of the treatment.

*Case 4.—Large, painful, interstitial, bleeding myofibroma of the uterus. Treatment, fourteen applications of galvanism. Result, relief of pain and menorrhagia, diminution in size of tumor, restoration to health.*

Miss L., æt. 39, unmarried, consulted me in November, 1886. *Subjective symptoms:* Excessive weakness, inability to walk without great fatigue, excessive and exhausting menstruation, lasting from ten to twelve days, sudden attacks of excruciating neuralgic pain in the tumor.

*Objective symptoms:* A large growth, extending from the umbilicus above and filling the pelvis, occupied the abdominal cavity. The mass was smooth and regular, with the exception of a lobe  $2\frac{1}{2}$  inches in diameter, which appeared to be at-

tached to the left side of the main growth. Measurements of abdomen, at umbilicus  $30\frac{1}{2}$  inches; midway between umbilicus and pubes, 35 inches. Cervix large and patulous, canal small and tortuous—the flexible probe, upon withdrawal, presenting the appearance of a right-handed corkscrew. Depth of uterus 21 cm., or about  $8\frac{1}{2}$  inches.

The treatment advised and adopted was a strong current of galvanism applied by Apostoli's method. A probe of pure platinum was constructed which would easily conform to the shape of the canal. I found great difficulty, however, in inserting this electrode, because of the peculiar contortions of the canal. Perseverance and care, however, overcame all obstacles, and after a few treatments there was no further trouble. After the internal electrode was in position it was attached to the positive pole, the large abdominal animal membrane electrode was applied externally and attached to the negative pole. A current was gradually turned on until, at the first treatment, 100 ma. was attained. The treatment carried on in this way never produced any discomfort further than a slight burning sensation of the skin beneath the external electrode, although currents of 500 ma. were sometimes employed.

November, 1886. Patient received nineteen intra-uterine galvano-positive treatments. Has had no attack of neuralgia since commencement of the treatment. Menstruation lasted six days.

December, 1886. Thirteen galvano-positive treatments had been given when menstruation appeared, one week earlier than usual, and lasted eight days; flow profuse, no pain.

January, 1887. Sixteen intra-uterine treatments—eight galvano-negative and eight galvano-positive. Menstruation again appeared after the regular interval, and lasted but two days. This was followed in January by eight galvano-negative treatments. Patient is at this time much improved in general health and is in the best of spirits. Since coming to Chicago she has not had a single return of the paroxysms of pain formerly so much dreaded.

February, 1887. Seventeen treatments; ten galvano-negative, seven galvano-positive. Depth of uterus 19 cm.; tumor visibly reduced. Menstruation lasts five days and is normal—no pain. Patient greatly improved in general health.

March, 1887. Nine treatments, all galvano-negative. Patient returned to her home March 11.

*Condition at this time:* Depth of uterus, 18 cm. Measurement of abdomen at umbilicus, 29 inches; midway between umbilicus and pubes, 33 inches. While there is this decrease in the abdominal measurements, the patient has gained considerably in flesh otherwise. Patient expresses herself pleased with results of treatment, and leaves with intention of returning upon the reappearance of any of the old symptoms.

During the spring and summer the health of the patient continued to be good but, fearing the tumor was again increasing in size, she returned in October to continue treatment.

Examination October 10: Depth of uterus the same as when patient left, 18 cm.; abdominal measurements, umbilicus 32, and midway between umbilicus and pubes 33 inches, showing that the tumor is rising in the abdomen. Has had no menorrhagia and no pain since treatment was discontinued.

October, 1887. Patient received fifteen treatments, all intra-uterine galvano-negative. Menstruation appeared after second treatment and was perfectly normal.

November, 1887. Nineteen treatments, all galvano-negative. Menstruation normal.

December, 1887. Eleven treatments of the galvano-negative variety were given. Patient returned home December 17 improved in every way. Depth of uterus 16 cm. Abdominal measurements, at umbilicus 30 inches; midway between umbilicus and pubes, 33 inches.

Patient writes January 30, 1888, as follows: "I believe if it had been possible for me to continue with you from the time of the first treatment to the present time, I would have been entirely relieved of this tumor. If it becomes necessary for me to come to you again I shall try to arrange so that I can remain until there is no longer any need for treatment. I feel that I would like any one suffering with a similar trouble to know how much relief I have obtained."

*Case 5. Large, painful, hemorrhagic, interstitial and subperitoneal fibroid growth filling the pelvis. Treatment, thirty-eight negative intra-uterine galvanic applications and eleven positive applications. Result, tumor reduced one-third, hemorrhage modified, pain relieved.*

Mrs. W., colored, married, unipara, æt. 30, and referred by Dr. D. H. Williams, of Chicago, consulted me early in 1887.

*Subjective symptoms:* Excessive and painful menstruation which lasted ten days, difficult and frequent urination, bowels extremely constipated, sensation of severe pressure upon perineum and rectum, great difficulty in walking, being obliged to remain almost constantly upon the bed. Complaints of "distressing weakness," poor appetite and digestion. These symptoms have developed and been increasing for the past three years.

*Objective symptoms:* By digital examination, the vagina was found large and shallow, with an irregular mass protruding into its posterior portion and depending from the cervix, which was entirely obliterated in the mass of the tumor. By bimanual manipulation the growth was found to extend to within 2 inches of the umbilicus, presenting a smooth and regular outline anteriorly, and more or less nodular appearance on the margins and posteriorly as far as could be reached

by rectal examination. Depth of uterine canal as ascertained at sixth examination, 16 cm., or 6½ inches. The course, while somewhat tortuous, took an anterior direction. While the growth was interstitial, it was distributed in such a manner as to enlarge the uterus to three or four times its normal size, with its greatest mass situated in the posterior walls.

October, 1886. On account of the tortuosity of the cervical canal I was unable to insinuate even the most flexible intra-uterine probe until after repeated attempts. Having once located the canal, however, it became an easy matter to apply an ordinary intra-uterine electrode. For the first treatments, therefore, I was unable to give more than a vaginal application. The sixth treatment was the first regular intra-uterine application. I commenced with the negative pole intra-uterine.

November, 1886. Five intra-uterine galvano-negative treatments were given. The patient menstruated twice during this month, the intermenstrual period being shorter than usual. The first, while profuse in quantity of flow as usual, and ten days in duration, was painless. The second was attended with similar symptoms, save that its duration was shortened to five days.

December, 1886. Thirteen galvano-negative intra-uterine treatments were given. Menstruation less profuse, painless and of five days duration. A marked improvement noticeable in the general health, spirits and appearance of the patient. Old neuralgia and pelvic symptoms, including constipation, entirely relieved. Tumor reduced fully one-fourth in size. Depth of uterus reduced from 16 cm. to 14 cm.

January, 1887. Eight treatments; two intra-uterine galvano-negative, six galvano-positive. Menstrual period nearly normal, general improvement still continues; patient able to attend to her work and walk about the streets.

February, 1887. Eight treatments; five galvano-negative, three galvano-positive. Menstruation normal, tumor gradually reducing. During this month the patient had an attack of fever which was ushered in by two or three distinct chills. As this attack was accompanied in the early stages by abdominal pain, it looked somewhat ominous, but proved to be nothing but intestinal irritation which was relieved by appropriate treatment. On account of this illness no treatments were given in March.

April, 1887. Nine intra-uterine galvano-negative treatments. Menstruation normal, tumor reduced to about one-third original size. At this time treatment was discontinued.

*Case 6.—Fibro-myoma of posterior wall of fundus. Treatment: 62 applications of galvanism. Result: Growth absorbed, all symptoms relieved—Symptomatic cure.*

Miss H., Fulton St., Chicago, unmarried, age 24, menstruated at 17. Dispensary ca:



This patient presented herself at Chicago Polyclinic Dispensary, May 17, 1887. Complained of excessive flowing, which exhausted her so as to interfere with her duties as a domestic. Paroxysms of pain occurred frequently without warning through pelvic region, from the bladder to the rectum. These, apparently, bore no relation to menstruation. Patient was anæmic; weight 110 lbs.

Patient complained of difficulty in urination; bowels constipated; symptoms had been increasing in severity for two years; has had no local treatment; has taken some internal medication without result.

Local Examination: Vagina small and sensitive. Cervix-uteri small, and situated well back in the hollow of the sacrum. Uterus by bi-manual manipulation appears about the size of three and one-half months' pregnancy. Impossible to introduce sound at first visit.

At second visit was able to introduce a flexible bougie to the depth of 10 cm., or about 4 inches, the probe took an anterior direction, this was followed by an Apostoli intra-uterine sound of platinum, which was attached to the negative pole of the battery. The abdominal electrode attached to the positive pole was applied, and a current of 300 ma. gradually turned on without the slightest discomfort to the patient. This was followed by five negative intra-uterine treatments, on successive days, and immediately before the next menstruation by four positive intra-uterine applications. During these ten treatments the current reached on two occasions to an approximate strength of 500 ma. The patient at these times experienced, apparently, no great discomfort. I discovered, however, that the effect on the mucous membrane of the uterus was too severe, and the current was never afterward allowed to pass 300 ma.

The menstrual period following was free from pain, and the paroxysms which previously had been so distressing, did not occur again. The flow was more profuse than before.

During the next intra-menstrual period patient received fifteen treatments—ten negative, followed by five positive. The former with Apostoli's probe, with a 300 ma. current, the latter by my concentration electrode, 3 mm. in diameter and 4 sq. cm. surface requiring 100 ma. current.

Second menstrual period passed without pain. The flow lasted three days, and was less in quantity than at any time for the past two years. Uterus measured, August 27th, 8 cm.

During next intra-menstrual period sixteen treatments were given—all negative—with the flexible electrode, requiring 100 ma. current.

Third menstruation free from pain, lasted four days, perfectly normal.

Twelve negative treatments were given during the next month. The following menstruation lasted three days, the flow being very scant.

The uterus at this time measured but 7 cm., and was but little larger than normal. The patient had become strong and hearty, weighed 122 pounds, and declared herself perfectly well. She was with difficulty persuaded to take a few more treatments—ten in all—when she stopped coming of her own accord. When seen in December she was well in every respect.

*Case 7.—Large, painful, hæmorrhagic myo-fibroma of the uterus, filling pelvis and lower abdomen. Thirty applications of galvanism. Symptomatic cure.*

Miss T., unmarried. Consulted me April 1, 1887. Eight years ago she discovered a tumor for which, in 1881, she consulted Dr. T. Addis Emmett, and remained under his care for several months, the principal treatment being the application of tincture of iodine and glycerine tampons. Since that time she has consulted other physicians, but the symptoms have gradually increased, the principal being difficulty in locomotion, frequent and painful urination, chronic constipation, palpitation of the heart, loss of flesh, general weakness, excessive menstruation, lasting from eight to fourteen days, being very violent the first five days.

*Objective Symptoms.*—Large tumor, about the size of a four or five months' pregnancy, occupying the pelvis, of interstitial variety, increasing the depth of the uterus to 19 cm., or 7½ inches. Cervix large, patulous, and directed toward the sacrum, and entered with great difficulty with flexible probe. Canal exceedingly tortuous and not easily traversed.

*Treatment: April.*—Eighteen intra-uterine galvano-positive, and eight intra-uterine galvano-negative.

*May.*—Five intra-uterine galvano-negative, making in all thirty applications, the current varying from 50 to 250 ma. The galvano-positive treatments were administered first, and until menstruation appeared, which was so modified that it was followed entirely by the galvano-negative treatment. While I advised the patient to remain longer with me it was necessary, for private reasons, for her to return home. During her stay in the city, and when under treatment, her general health and nutrition were much improved.

*Results.*—May 6th, uterus reduced in depth 3 cm., measuring at present 16 cm. Tumor visibly reduced, locomotion greatly improved, general gain in flesh and strength.

Not having had an opportunity of examining the patient since that day I have no means of judging of her condition except from her own words: "You write, Dr. Martin, to know how I am. I am decidedly better. For some time after my return from Chicago I did not think I could live. In July I had a very sharp attack of peritonitis, but that is all over. I have not been as well in ten years. I am a surprise to my friends and to myself, too. Do you think it possible that three

months after treatment the electricity could be having its effect? I am like the man in the Bible, I only know I am healed."

The reply I make to the above question is as follows: The patient has received no other treatment. It is no uncommon occurrence in the treatment of tumors by electrolysis for the growths to gradually reduce in size and symptoms disappear months after the treatments have been discontinued. Verified cases substantiating this fact have been reported by Dr. J. N. Freeman, of New York, by Dr. Apostoli himself, and by Dr. Thomas Keith, also. The fact of this patient receiving thirty very strong applications of galvanism in a little over a month, receiving marked benefit while under treatment, and knowing the history of the case in all its details as I do, leads me to state unhesitatingly that it can be ranked under the same head as those reported by the above operators.

*Case 8.—Myo-fibroma of the right horn of the uterus. Excessive hemorrhage, accompanied and followed by excruciating pain. Sixty-two applications of galvanism. Cure.*

Mrs. M., æt. 29, married two and a half years, no children; residence Hyde Park, Ill. Consulted me March 31, 1887. Menstruation preceded, and until thoroughly established, accompanied by pain. Excessive, but not exhaustive flowing has been the rule, lasting on an average seven days. The disappearance of menstruation is followed the succeeding day by the most excruciating pelvic neuralgia that it has been my lot to witness, which lasts about two weeks, and while continuous has periods of greater and lesser degrees of violence.

Local examination revealed the cervix uteri normal and in proper location. A flexible probe entering uterus passes to the depth of 8 cm. or a trifle over three inches, and is posteriorly deflected striking a very tender point at its distal extremity, which causes pain similar to that experienced after menstruation. Bimanual manipulation reveals enlargement of the right horn of the uterus, with a solid growth the size of a goose egg protruding from its surface in the direction of the right ovary. By rectal abdominal examination this proves to be growing from the fundus of the uterus. The whole gives the impression of a right lateral retroversion of a uterus fully four inches in length.

This patient had received treatment and advice from some of the best physicians of the country, including one of the leading gynecologists of Chicago, but had never found the slightest relief. It was with the idea of receiving the galvanic treatment that she was sent to me.

Considering the case suitable for the Apostoli treatment, I commenced it in April. I introduced an intra-uterine flexible electrode 3 mm. in diameter, with an active surface of 2 sq. cm.

in such a manner as to bring the active portion of the electrode in accurate contact with the sensitive portion of the uterus, which had been discovered in probing. It was then attached to the negative pole of the battery, the circuit completed by the abdominal electrode, and a current of 50 ma. carefully turned on. At the end of about three minutes the patient complained of the "old pain." The current was immediately reduced and the treatment ended. She was given stimulants and directed to remain quiet. The pain gradually subsided, and at the end of an hour she was able to return home.

The next treatment, April 4, was similar to the first, save that a much weaker current was used in order to avoid the previous unpleasant effects, and to regain the confidence of the patient. In April, twelve treatments were administered, the strength of the current being gradually increased, until the 50 ma. required were easily tolerated. The first menstruation appeared in the last week of the month and lasted five days. It was followed by the customary pain which, however, was reduced in duration from two weeks to two days.

In May, eight treatments were given; four galvano-negative and four galvano-positive. This month the menstruation lasted but four days, and was succeeded by one day of pain, which was less severe than formerly.

In June, twenty-four treatments were given, all galvano-negative. Menstruation this month lasted four days, the flow very greatly reduced, and to the delight of the patient, the old pain failed to reappear at all.

In July, nine treatments were given, all galvano-negative. Menstruation was perfectly normal. The depth of the uterus reduced to 6 cm. and the foreign growth had almost disappeared.

In August, eleven treatments, all galvano-negative, were given. Menstruation normal and patient's general health excellent.

In September, seven galvano-negative treatments. Tumor still reducing.

October, the patient received one treatment on the 3d of the month. She then left the city for some time and I did not see her again until December 8, when I found by examination that her pelvic organs were perfectly normal. The uterus measured 6 cm. in depth. The growth was imperceptible. The two menstruations passed while absent were perfectly normal. The patient was discharged cured. I see her frequently, and she remains in the most perfect health.

*Case 9.—Large interstitial, partially submucous hemorrhagic fibroid growth of the uterus, enlarging that organ, filling the pelvis below and extending nearly to umbilicus above. Thirty-seven applications of galvanism, 20 intra-uterine galvano-negative, 17 intra-uterine galvano-positive. Reduction of growth one-third. Other symptoms not relieved.*

Mrs. S., widow, was referred to me by Dr. J. B. Sullivan, of Stanton, Michigan. Age 34, no children, no miscarriages, puberty at 14. Subjective symptoms: Excessive and exhaustive menstrual which lasts from four to ten days and is accompanied with excruciating bearing-down pains occasionally. Bowels constipated and often difficulty in urination. Bearing-down pain is complained of and the greatest difficulty in locomotion is experienced. Patient very thin and anæmic.

*Objective symptoms:* Large, regular, oval-shaped growth, filling the lower pelvis and extending within a couple of fingers breadth of the umbilicus is found upon bimanual manipulation. This proves to be an enlargement of the uterus, as the probe easily enters to the depth of 17 cm. or  $6\frac{3}{4}$  inches. The growth is movable and apparently free from adhesion. Cervix large and patulous.

This patient was given at once the benefit of Apostoli's treatment. The treatments given before the first menstruation were all intra-uterine galvano-positive. The first menstruation was postponed for more than two weeks, when it did appear, however, it was as profuse as at the former one before any treatment had been given. The treatment was continued in this way: the positive applications being given immediately before menstruation, and the negative following menstruation, until twenty of the latter or negative, and seventeen of the former or positive, had been given. No attempt in this case was made at accurate concentration; in this case the large Apostoli platinum electrode being used internally and the current varying from 100 to 300 ma. While the growth decreased in size the hæmorrhage was not controlled, and at the end of about three months the patient reluctantly returned home for private reasons, with the assurance that she would return. She has not done so, however, and in response to my inquiries she writes that while the menorrhagia is no more severe than when she came to me, it is no better. Her general health and other symptoms are about the same.

While this patient was under treatment she had a number of attacks of uterine pains accompanied with expulsive contractions, which succeeded in expelling a number of pieces of a fleshy character. This upon examination proved to be of a fibromyomatous character. I decided from this and from subsequent examinations with a probe that a portion of the growth was submucous, and that through the efforts of the womb this was being forced into its cavity and its expulsion accomplished. This fact accounted for the poor success I had in checking the menorrhagia, although I believe with continued treatment the patient would have been relieved of all symptoms.

The entire growth while under treatment

diminished approximately one-third in size. The uterus was reduced in depth from 17 cm. to 15 cm.

*Case 10.*—*Large subperitoneal fibroid growth, about 8 inches in its long and 4 in its shorter diameter, with irregular contour, attached to the entire fundus and posterior wall of a slightly enlarged uterus. Thirty applications of galvanism. Symptomatic cure.*

Mrs. H., married, age 45, no children, no miscarriages, was referred to me by Dr. A. Reeves Jackson, Aug. 22, 1887. She first menstruated at 17, and was normal in this respect until about 12 years ago, when a slight increase in quantity of flow was noticed, which has gradually increased up to the present time. Now menstruation lasts from five to six days, is profuse, and is accompanied with considerable pain. Serious pressure on rectum and bladder is complained of, which is the source of greatest discomfort to patient and is the cause of her seeking relief.

*Objective Symptoms:* A solid fibroid tumor, 8 by 4 inches in diameter, occupying and dilating the upper portion of the vagina, completely fills the pelvis. Protruding from its lower portion and almost reaching the vulva is the cervix, from which can be traced above, the body of the uterus. Its canal, which is posteriorly directed, being 8 cm. or a trifle over 3 inches in depth. From the neck of the uterus the tumor extends as an irregular mass in all directions, pressing upon the rectum posteriorly and the bladder anteriorly, and is almost immovable.

*Treatment.*—August 4th, intra-uterine galvano-positive treatment, by means of the flexible intra-uterine electrode, requiring 110 ma. current, were given. In the early part of September two more galvano-positive treatments were given. The effect of these six treatments so modified the following menstruation that in the succeeding applications the galvano-negative current was employed entirely. During the remainder of this month and until the 15th of November 19 intra-uterine-galvano-negative treatments were given, when the condition of the patient was as follows: Menstruation for the first three months normal, general health remarkably improved. Pressure on rectum and bladder almost entirely relieved. Tumor reduced in size approximately one-third, and it has become quite freely movable. The uterus is less than 7 cm. in depth. From this time until December 15th, I varied the treatment and gave 10 intra-vaginal galvano-negative applications. The vaginal electrode being so placed as to cause the current to pass through the mass of the tumor situated behind the uterus. This was done in order to reach that part of the tumor which was inaccessible owing to the shallowness of the uterine canal by any other means save galvano-puncture, which operation I always seek to avoid if possible. The patient was at this time so much improved, that by my advise she discon-

tinued treatment, with the expectation of returning if any unfavorable symptoms should reappear.

*Case 11.*—*Interstitial, hæmorrhagic, painful myofibroma of the anterior wall and fundus of the uterus increasing its depth to 3½ ins. or 8 cm. Thirty intra-uterine applications of galvanism. Depth of uterus reduced to 2½ ins., general health improved, menorrhagia modified, other symptoms relieved.*

Mrs. J., æt. 32, married 9 years, 2 children, the youngest 6 years of age, has had two miscarriages, the last one occurring about 3 years ago. The present trouble dates from that time, and first manifested itself in frequent urination from pressure on the bladder. Soon after this the patient had a sharp attack of peritonitis, and from that time severe hæmorrhage has taken place at each menstruation, which has, however, been somewhat irregular.

This patient has been under the care of several prominent physicians.

*Subjective Symptoms.*—Menstruation profuse, lasting ten days; pressure upon bladder renders urination frequent and painful; locomotion difficult from general feeling of pelvic weakness; patient anæmic and discouraged. *Objective Symptoms:* Uterus large and congested, occupying about its normal position, depth 8½ cm. or 3½ inches. Upon the fundus and anterior wall of the uterus is a distinct thickening, which gives that organ the appearance of an acute ante flexion and increases its apparent depth about 2 inches.

The first treatment was given September 15, the flexible electrode 4 mm. in diameter requiring 100 ma. current being employed. From this time until Dec. 19, 30 intra-uterine treatments were given, the last four or five before each menstruation being galvano-positive, the rest galvano negative. This patient improved immediately in general health and nutrition. Menstruation from the first was modified, but was not at any time satisfactorily checked, before the treatment was necessarily discontinued. Notwithstanding this, the uterus was materially reduced in size, measuring 7 cm. or less than 2¾ inches, and the thickening in the anterior wall was diminished at least two-thirds. The pelvic symptoms, including pressure upon the bladder and constipation, disappeared. At this time, much to my regret, treatment was discontinued on account of removal from the city. The patient assured me, however, that I might expect her back should any of the old symptoms reappear.

*Case 12.*—*Large hæmorrhagic, interstitial, subserous, fibroid growth of the uterus. Twenty-one applications of galvanism. General health improved; pain and pressure on bowels relieved; tumor reduced one-third. Still under treatment.*

Mrs. B., age 39, married, three children, youngest child 7 years old, one miscarriage. Was referred to me by Dr. H. T. Byford, Sept. 21. The

tumor had been discovered by her family physician about two weeks previous to date.

*Subjective Symptoms.*—Difficulty in locomotion; bowels obstinately constipated; constant and increasing disurea; menstruation profuse and exhaustive; profuse leucorrhœa; constant backache and general feeling of bearing down.

*Objective Symptoms.*—Large unyielding growth, filling pelvis and lower part of abdomen, attached to the whole fundus and posterior wall of the uterus in such a manner as to greatly enlarge that organ. Depth of uterus 16 cm., or about 6 inches; cervix large and patulous; canal long, easily admitting a sound 5 mm. in diameter to its full depth, which takes first a posterior direction, afterwards curves anteriorly, and when withdrawn presents the appearance of one-third the arc of a circle. The uterus and tumor are movable, the latter fills the pelvis, and rises above it so as to considerably enlarge the lower abdomen. Measurement of umbilicus 39 inches, midway between umbilicus and pubes at most prominent portion of growth, 44 inches.

*Treatment.*—From Sept. 21st to Dec. 20th, 21 intra-uterine treatments were given. The internal electrode employed was of the flexible variety, 5 mm. in diameter, and had an active surface of 4 sq. cm., requiring a current of 100 ma. It was used as a positive electrode, in all, six times; as the negative, fifteen.

*Results.*—The general health of the patient commenced to improve immediately; first menstruation was sufficiently modified to greatly encourage her; pain and pressure in bowels soon greatly relieved.

*Condition on Dec. 21, when temporarily discharged.*—Tumor reduced fully one third; general health much improved; notwithstanding a considerable gain in flesh, the abdominal measurements are, at umbilicus, 38 inches, as against 39, three months ago, midway 40, as against 44. Depth of uterus reduced from 15 cm. to 12 cm. Menstruation normal; pressure on bladder and rectum greatly relieved; all pelvic discomforts gone; walks with ease:

The patient at this time was so much improved that I advised her to stop treatment for a time and await results, and to return should it prove necessary.

*Case 13.*—*Myofibroma of the anterior portion of the neck and body of the uterus, 7 cm., or a little less than 3 inches in diameter. Sixty-one applications of intra-uterine negative galvanism. Cure.*

Mrs. T., age 27, married five years, no children, no miscarriage.

*Subjective Symptoms.*—Frequent and difficult urination; profuse, but not exhaustive menstruation, with much pain during the latter portion.

*Objective Symptoms.*—Depth of uterus 8 cm., or 3¼ inches; sound passes in the direction parallel to the axis of the body. On the anterior wall of

the body and neck of the uterus is a hard mass, or tumor, which would measure, approximately, 7 or 8 cm. in diameter, of a smooth, regular exterior and quite freely movable with the uterus. Trouble has been developing for about four years.

The diagnosis in this case was first made by Dr. A. E. Small, who had during my absence taken charge of my clinic at the S. S. Dispensary, where the patient presented herself.

The first treatment was given June 7th. An Apostoli intra-uterine platinum probe was inserted to the bottom of the uterine canal and connected with the negative pole of the battery. The large abdominal electrode was employed to complete the circuit by applying it over the tumor on the abdominal surface in such a position as to insure the passage of the current through the mass of the growth. A current was then gradually turned on until 200 ma. was reached. This was allowed to pass for about five minutes, the patient experiencing no discomfort. Considerable discharge of a watery character took place from the uterus and a bubbling of gas was noticed around the staff of the electrode as it made its escape through the fluid. Eleven of these treatments were given during June, a current being tolerated a number of times of as high intensity as 500 ma. The tumor showed a tendency from the beginning to reduce rapidly in size. The menstruation this month was rather more profuse than usual, but painless.

July 15, intra-uterine negative treatments were given. Highest intensity employed, 300 ma. No discomfort, except tenderness of the skin; growth rapidly decreasing; uterus 7 cm.; menstruation normal.

August, fourteen intra-uterine negative treatments given. Highest intensity 2.50 ma. Patient declares herself well; growth appears simply as a thickening of the anterior wall of the uterus, or as an anteversion; pressure on bladder gone; menstruation rather profuse.

September. It was with difficulty that I could convince the patient that it was still necessary for her to receive treatment. A few were given this month by Dr. Wimermark. Highest intensity 200 ma.

October. Patient with difficulty induced to take ten more treatments.

Discharged October 24th. Depth of uterus 6 cm., or about  $2\frac{3}{4}$  inches; thickening of the anterior wall no longer perceptible; all other unnatural symptoms have disappeared. Result: cure.

*Case 14.—Large, polypoid, sub-mucous growth, attached by a small pedicle to the interior of the fundus of uterus and protruding at the cervix. A few surface applications of galvanism, made by means of a cervical electrode. Result: Nothing appreciable, recommended operation.*

which ergot or an operation was better adapted to give prompt and permanent relief. Consultation with Dr. Mann, of Buffalo, was therefore advised, and the growth was successfully removed.

*Case 15.—Myofibroma of fundus and posterior portion of uterus, accompanied with menorrhagia. Twenty-three intra-uterine applications of galvanism. Cure.*

Mrs. M., æt. 32, three children, youngest 3 years of age, consulted me at the South Side Dispensary some time in the early part of October, 1887.

*Subjective symptoms:* General weakness and increasing difficulty in locomotion. Menstruation profuse and exhausting in amount, and accompanied with severe contractive pain; duration about eight days. Constipation has been of late a distressing symptom. General pelvic pressure and painful bladder symptoms are complained of. These symptoms have been getting worse and more aggravated for about two years. Appetite and digestion fair.

*Objective symptoms:* Cervix uteri large and patulous. Canal large and easily followed with flexible sound to the depth of 11 cm., or  $4\frac{1}{2}$  inches. Course of sound for about 2 inches parallel with axis of pelvis, then takes a sudden bend anteriorly to the bottom of the uterus. In a bimanual manipulation the uterus presents the appearance of a  $3\frac{1}{2}$  months' pregnancy, smooth and movable. The greatest thickness of the walls is in the fundus and posterior portion of the uterus below the fundus, although the whole organ is considerably hypertrophied. The uterus proper is quite decidedly anteverted, as shown by the probe.

This patient, commencing treatment in the middle of October, received twenty-three applications up to the middle of December. The internal electrode employed was of the flexible variety, 3 mm. in diameter, with an active surface requiring a 100 ma. current. The first six treatments given were of the intra-uterine positive, the remaining seventeen were intra-uterine negative. The current was well tolerated and the patient, judging from her faithful attendance, was not displeased with the effect. Menstruation was markedly modified for the better at its first appearance after treatment was begun. The general nutrition of the patient commenced to improve at once, and after the first month locomotion was accomplished with much greater ease, and the pelvic symptoms were greatly relieved, including the constipation. In this case a peculiarity was noticed in there being a much larger flow of clear watery fluid from the uterus during a negative intra-uterine application than is usual. At first this flow was very profuse, sometimes filling the speculum during a treatment. This watery discharge, however, gradually became less and less as the treatment progressed, until finally it was no more than in ordinary cases.

This case was soon discovered to be one in

The recovery of this patient was uninterrupted, and when she received her last treatment, December 24, she was in the following condition: Uterus reduced fully one-half in size—its depth being reduced from 11 to 8 cm. The abnormal thickening of the fundus and sides of the organ had entirely disappeared. The large and patulous cervix was reduced to normal, and the discharge from the cervical canal ceased. The uterus is movable and menstruation painless and normal in quantity, lasting but three days. Constipation has disappeared and the pressure on bladder is entirely relieved. Patient is in better health than at any time since birth of first child.

#### GENERAL SUMMARY.

1. A means of generating a continuous current of electricity of steady and uniform character, that can give an actual current strength through a resistance of 200 ohms, of 500 milliamperes, is necessary in order to obtain all the benefits of this treatment.

2. Fibroid tumors of small size can be completely absorbed by the proper application of strong currents of galvanism.

3. Hæmorrhages from hæmorrhagic fibroid tumors can be promptly cured by the local coagulating effect of the positive pole when it is applied intra-uterine. Severe neuralgias so often accompanying these troubles can invariably be relieved by three or four applications of this treatment.

4. When the cervical canal cannot be entered by any form of intra-uterine electrode, flexible or otherwise, after repeated trials, a negative galvano-puncture should be made into the presenting part of the obstructing mass of the tumor, and an artificial canal opened, which is to take the place of the impenetrable uterine canal in all subsequent treatments.

5. The intra-uterine electrode should in all cases be negative, unless there is hæmorrhage or excessive leucorrhœa, when the positive pole is always required. The same patient, may, however, present symptoms demanding the use of both poles at successive operations.

6. The strength of the current should depend entirely upon the amount of active surface of the internal electrode, and should be 25 milliamperes for each sq. cm. of active surface in actual contact with the endometrium. If more is used the concentration of the current will be sufficient to cause troublesome cauterization, if less is used the concentration at any one point will not be sufficient to cause the necessary coagulation for checking hæmorrhage.

7. The duration of the treatment should be five minutes of the maximum current required.

8. The number of operations is necessarily dependent upon and influenced by the result to be accomplished. A severe hæmorrhage can be

checked, and symptomatic relief can often be accomplished by four or five sèances, while a general reduction of the tumor necessitates many operations, varied of course, according to the size and location of the growth. In some cases, of large multiple tumors a relief of symptoms, or symptomatic cure, must be accepted as a substitute for an actual cure.

9. The operation should be intra-menstrual, if possible, if hæmorrhage is continuous, however, operate during flow. The sèances can occur as often as every day with the system of concentration adopted that enables one to attack different portions of the canal at succeeding treatments, or it can be given with advantage as few as once a week.

10. Since the adoption of the flexible intra-uterine electrodes and Dr. Apostoli's vaginal galvano-puncture, extra-uterine puncture should be regarded, if at all, only as a last resort.

11. Galvano-puncture needles, and the internal electrodes, should be constructed of material that is not injured by coming in contact with strong carbolic acid, or 1:1000 bichloride mercury solution. All internal electrodes should be thoroughly scrubbed with a nail brush and soap and water after each application, and allowed to remain in one or the other of these standard antiseptic solutions until they are to be employed again, when they should be washed in a weaker solution of the same before using. Before a vaginal puncture is made the vagina should be thoroughly wiped out with a 1 to 3000 bichloride solution.

12. There is no excuse for any percentage of mortality in the proper application of this treatment. While Dr. Apostoli has had two deaths in 275 cases, he candidly admits they were due to avoidable accidents rather than to any legitimate procedure of the operation.

13. In experienced hands, and by the adoption of the present means of concentration, the most delicate and sensitive patient can receive, without experiencing any severe discomfort, all the benefits to be derived from this valuable treatment.

163 State Street, Chicago.

**NIGHT SWEATS.**—Few practitioners appreciate the exceedingly great value of agaricin as a remedy in night sweats, especially those of phthisis. The most profuse sweat is checked almost by magic, with a single dose. It operates by diminishing thirst and increasing the secretion of urine. The dose may be pushed to the extent of one grain in the course of twenty-four hours. The single dose for an adult is from one-eighth to one-fourth of a grain.—*Technics*, No. 8. Boston.

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# NOTE ON RUMBOLD'S METHOD OF TREATMENT OF CATARRHAL INFLAMMATIONS OF THE UPPER AIR PASSAGES.

BY ELY McCLELLAN, M.D.,  
SURGEON UNITED STATES ARMY.

My note published in *THE JOURNAL* of August 18, has occasioned so many letters asking for further information as to the details of the method therein advocated, that I feel called upon to present a second paper on the subject in which the attempt will be made to detail each step in the procedure so plainly, that it will enable those who may wish to avail themselves of the method of treatment, to proceed in its practical administration without delay. As stated in my former paper, the method of treatment which is advocated, originated with and has been elaborated by, Dr. Rumbold, whose experience in the treatment of the diseases of the throat, nose and ears dates back to 1855, and who has used vaseline since 1872.

The history of this therapeutic measure is as follows: In 1866, Dr. Rumbold obtained the glass spray producers of Maunder, to each of which a small bottle was attached as the receptacle for the fluids to be atomized. After some experience in their use, Dr. Rumbold commenced the manufacture of glass spray producers in his own office, and with his own hands produced the instrument in the shape in which it is now used.

In 1870 a specimen of cosmoline was placed in his hands, and having at the time a patient in whose case great difficulty was had in removing inspissated mucous, the cosmoline at the point of liquefaction was exhibited by means of a glass spray producer, and the results obtained in this case led to the development of the measure under consideration.

For many years vaseline has been recommended as an available application to inflamed mucous surfaces, but so far as I am able to determine, Dr. Rumbold is the first investigator who devised means by which vaseline at the point of liquefaction can be thrown upon all the deep-seated surfaces of the nasal and pharyngo-nasal cavities. This therapeutic measure has stood the test of eighteen years practical experience, and has invariably yielded the anticipated results in all cases which were at all susceptible to improvement.

In my former paper I stated that this method was not fully recognized outside of the locality in which Dr. Rumbold resides. It was by no means intended to convey the impression that it had not been presented to the medical profession by its originator. Dr. Rumbold began the publication of his views in 1868. In 1872 they were presented to the St. Louis Medical Society. The volumes

of the *St. Louis Medical and Surgical Journal*, and the *Chicago Medical Journal and Examiner*, will be found to contain them. The first edition of his work was published in 1881. The second and enlarged edition was published in the present year. It is not intended in this paper to attempt any description of the many and valuable measures which Dr. Rumbold has devised in the treatment of diseases of the throat, nose and ears, but to confine myself to his method of treatment of what is commonly known as nasal catarrh, with a description of the necessary instruments, and an account of the method by which they should be used.

The essentials are as follows:

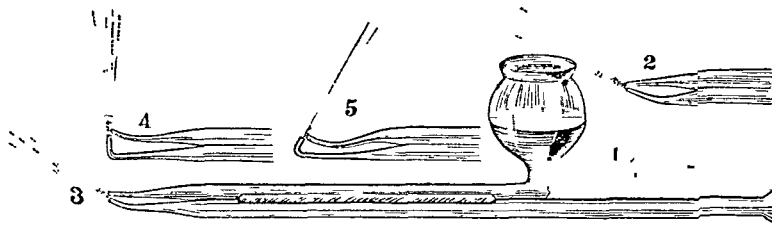
1. Four spray producers. 2. A tongue depressor. 3. A nasal speculum. 4. A pharyngeal mirror. 5. Suitable illumination. 6. Compressed air. 7. Means by which the vaseline may be melted. 8. Towels and napkins. 9. An active disinfecting solution.

I. The Rumbold *spray producers* are made of glass or white metal. They are 8 inches in length, in the form of the well-known atomizing tubes, but the upper tube is armed with and terminates in a cup capable of holding a drachm of melted vaseline. Between the cup and the spray point, the tubes are bent laterally, sufficient to allow them to maintain an upright position when placed upon a table. The free extremity is enlarged to a bulb which makes the attachment to the tubing which conveys the compressed air more secure. These spray producers are arbitrarily numbered 1, 2, 4, 5; numbers 4 and 5 being found to meet all the indications of the original No. 3. These instruments deliver the spray as shown in the following plate: (See Cut 1.)

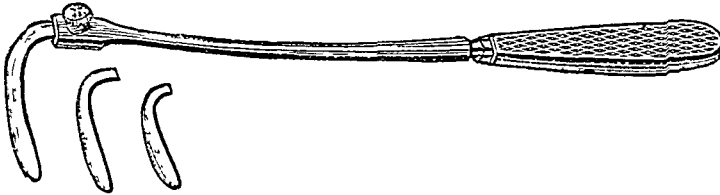
II. The Rumbold *tongue depressor* is an instrument 9 inches in length. It is furnished with three blades of different lengths, for use upon adult males and females and children. The blades are respectively 3, 2½ and 2 inches in length. They are attached to the handle by a screw and are rapidly placed in position and detached. The blade is only long enough to depress the base of the tongue, without occasioning gagging. This instrument should be held by the patient, whose hand will not interfere with the movements of the operator. (See Cut 2.)

III. The Rumbold *nasal speculum* is a bi-valve with a handle 8 inches in length. The blades are 1½ inch long, and are so attached to the handle as to be readily reversible. The blades are flat and sufficiently wide to protect the membrane from contact with the hot instrument when a treatment is made. This instrument admits of free inspection of the anterior nares, and may be used in all operations. (See Cut 3.)

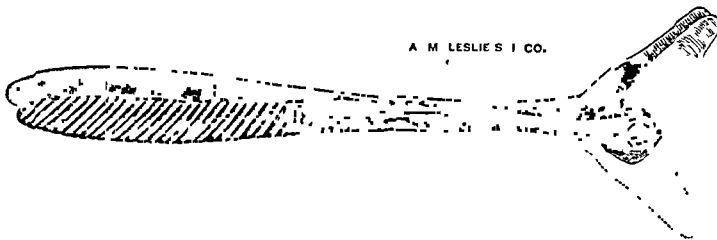
IV. The Rumbold *pharyngeal mirror* is a most ingenious instrument. The mirror is controlled by a spring upon the handle, by means of which



CUT No. 1.



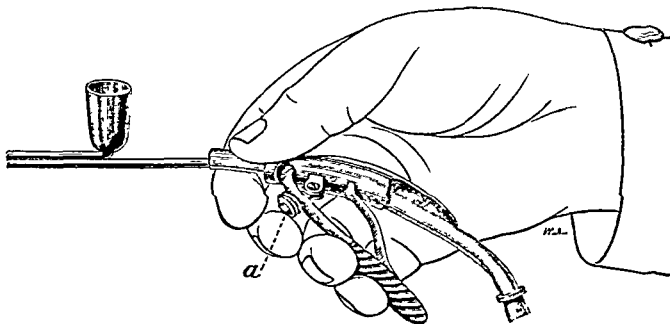
CUT No. 2.



CUT No 3



CUT No. 4.



CUT No. 5.



it can be placed at and maintained in position of various angles without being removed and without the patient's knowledge. The holder is so arranged that mirrors of various sizes and shapes may be employed. (See Cut 4).

V. *Suitable illumination.* Light from a clear sky, reflected by a concave mirror attached by means of an elastic band to the forehead of the operator, has been thought to be the best illuminator. Its use, however, is open to the objection that sunlight is not always attainable, and that the use of the mirror upon the forehead becomes exceedingly irksome. It is therefore thought best that, in the treatment of this class of diseases, the operator should accustom himself to artificial illumination. The Tobold illuminator, applied to either a gas or coal oil burner, are the measures most in use and are very satisfactory in examinations. The A. M. Leslie Surgical Instrument Company have recently furnished me with a battery of three Turner cells which, by means of an Edison two candle power light, furnishes a perfectly satisfactory illumination. I do not know but what it is far more satisfactory than any other means at my command.

VI. *Compressed air.*—The simplest means of obtaining compressed air will be found in the soft rubber hand bulb, now so constantly in use for all atomization. The use of this is, however, laborious and, when many patients are to be treated, becomes tiresome. Dr. Rumbold has devised a most excellent apparatus for this purpose, which is far superior to others in use, by which the air is compressed by hydraulic pressure. It is, however, too elaborate except for the office of a specialist. Various forms of tanks for holding compressed air are on the market, the most valuable of them being, in my experience, the Standard Hygienic Air Compressor of the Leslie Company. This tank is furnished with a gage and cut-off, rendering the flow of the air absolutely within the control of the operator. I have used such a tank for some time and have found no cause of complaint in its action.

When a tank of compressed air is employed, it involves a necessity for an additional air "cut-off" by means of which the flow may be instantly arrested. The Rumbold spray controller answers this purpose perfectly. (See Cut 5.)

VII. *A heating apparatus.*—Where gas or lamps of any kind are employed for purposes of illumination, the agent for this purpose is constantly at hand. Where the natural light or the electric candle is employed, a small spirit lamp will be found to answer the purpose.

VIII. *Napkins and towels.*—Absolute cleanliness must be observed in this method of treatment. A small napkin should be used in all handling of instruments. It is also good form to furnish a clean handkerchief for the use of a patient. Vaseline is a rebellious substance when

the attempt is made to remove it from fabrics, therefore care should be taken not to soil the clothing of patients. The soiled napkins and handkerchiefs should be treated antiseptically when laundered.

IX. *A disinfecting solution.*—A convenient bowl should always be at hand, filled with a disinfecting solution in which all instruments should be placed after employment. I have found the solution of Labarraque in rain-water to answer this purpose. In such a solution every instrument which may come in contact with the mucous surfaces should be immersed after each use, and they should be carefully dried on a clean napkin before being again employed. The operator should constantly bear in mind the fact that, to a majority of his patients, the thought of submitting to the employment on their persons of instruments which have been indiscriminately used is most repulsive, and that nothing is more disgusting than the odor of dried saliva on tongue depressors and throat mirrors.

It will be recollected by those who read my former paper that the method of treatment advocated is based upon the abandonment of all heroic procedures. The removal of morbid secretions, either fresh or dry, from the inflamed mucous surfaces is to be accomplished, but not by means which will in any way add to the local irritation, and this is to be immediately followed by a thorough application of an aseptic medicament which has a sufficient density and tenacity as will enable it to remain impervious to the air for several hours after the application has been accomplished; and experience has proven that these indications are fully met by the employment of vaseline. Vaseline, however, is not recommended as a basis for the exhibition of other remedies, but for its own intrinsic properties and for its physiological effect.

The medicaments now in use by Dr. Rumbold are as follows: 1. Vaseline. 2. Eucalyptol. 3. Gaultheria. 4. Fluid extract of pinus canadensis and glycerine. His experience has proven that the aseptic property of vaseline is enhanced by the addition of eucalyptol; that the extract of pinus canadensis is a decided tonic and slightly an astringent to the mucous membrane of the throat; and that the oil of gaultheria increases the tonic effect. The glycerine is used as a menstruum in the pinus mixture and as a placebo to the gustatory nerves. To prepare these substances for use the following directions should be observed: Take a wide mouth glass stoppered bottle, place in it 2 ozs. of vaseline, add 10 minims of eucalyptol, and mix cold. To mix first use a glass rod and then a small spoon. Continue this process until the eucalyptol is intimately incorporated with the vaseline. In a second bottle containing the same amount of vaseline add 10 minims of the oil of gaultheria and mix as in the first instance. In a graduated measure place 1 oz. of glycerine, on it

drop 30 minims of the fl. extract of *pinus canadensis*,<sup>1</sup> and then add slowly 3 ozs. of boiling water and mix. When cold place in a bottle similar to those first used. A fourth bottle should contain a supply of pure vaseline. Each bottle should be labeled. A small spatula should be at hand by which the vaseline may be removed from the bottles when the spray cup is to be charged.

In making an examination and giving a treatment it is well to observe the following directions: On a convenient table should be arranged the various instruments, appliances, and medicaments, so as readily to be reached. The operator should be seated so that his left arm is free of the side of the table. The patient should be seated facing the operator and on the left side. This relative position should be invariably maintained, even in such cases as are examined by means of the natural light. The operator should never stand over or sit in front of his patient. In making an examination the patient is handed the tongue depressor and simply told to open his mouth and apply the instrument. These simple directions are generally sufficient to secure free access to the throat, which can be fully illuminated and rapidly examined.

The treatment commences by warming spray producer No. 4. When warm a drachm of pure vaseline is placed in the cup, to which is added a small quantity of the eucalyptolized vaseline, not to exceed a grain in weight. The instrument is now heated until the vaseline is thoroughly melted and until the tubes in their length are hot enough to continue the liquefaction. Connection is now made with whatever apparatus is used for compressed air. The tongue depressor is again applied by the patient. The spray point is carried behind the velum pendulum palati, and the spray is thrown upwards and backwards into the pharyngo-nasal cavity. This act of spraying should not be continued but for a moment, when the instrument should be removed to allow the patient to clear his throat. If a rubber hand bulb is used, its compression once or twice on each side of the uvula will be sufficient for a first application. It is not necessary to use the entire contents of the cup; but that which remains may be emptied into the cup of No. 5, which, when made sufficiently hot, is used in the same manner as was No. 4. The spray from this instrument is thrown upwards and forwards, reaching the entire anterior surface of the cavity, cleaning perfectly the posterior nares and reaching the surfaces of the turbinated processes. The same caution as to the length of the application must be observed. As the patient becomes accustomed to the treatment a larger amount of the medication can be used.

The next step is the employment of spray producer No. 1. The cup is warmed and charged as before with pure vaseline, to which is added about a grain weight each of the eucalyptol and gaultheria mixtures, with 5 drops of the *pinus* compound. The application is freely made to all the parts exposed through the mouth. No 2 is now charged with the vaseline and eucalyptol mixture. The nasal speculum is inserted into one nares, the spray producer is passed along the blade of the instrument, and the hot spray is thrown in until every portion of the nasal cavity is reached, when it is repeated on the other side. This procedure is facilitated by raising and depressing the free end of the instrument during the act of treatment. The patient is now told to clear his nose and, that being accomplished, a second but slighter application is made so as to leave a thin film of vaseline upon the mucous surface. In making these applications it must be remembered that, while vaseline is used in each of the four spray producers, the addition of eucalyptol is confined to Nos. 4, 5 and 2; that the four remedies are to be combined only when spray producer No. 1 is used.

A careful inspection after each application will demonstrate how completely melted vaseline will remove from the mucous surfaces all secretions, recent or inspissated. Where a considerable volume of water applied with force would be necessary for the purpose, a spray of an inconsiderable amount of hot vaseline loosens, detaches the secretion, and allows it to be discharged without violent effort. A single treatment is often sufficient to demonstrate fully the antiphlogistic action, as shown in the lessening of the local irritation of the mucous membrane and in the increased comfort of the patient.

These applications are useful in rhinitis in its various forms and many sequelæ; in nasal and bronchial catarrh; in acute and chronic tonsillitis; in pharyngitis and laryngitis; and in that indefinite condition of "bad cold" which, unchecked, may result in serious forms of disease. They are peculiarly valuable when exhibited before exposure to intense cold and damp night air, and not infrequently exert a decided prophylactic agency after such exposure. The results which I have obtained from this treatment have invariably been good. In many instances I have succeeded in aborting acute attacks; in many others I have obtained a speedy convalescence. I have abandoned the use of the water douche entirely, having found from the employment of the hot vaseline spray an agent which produces no local irritation when used, and much more powerful in effecting good results.

The applications should be made at intervals of from twelve to twenty-four hours until the severity of the symptoms is relieved, and then every second or third day as necessity demands. It must be

<sup>1</sup> The specimen of *pinus canadensis* used should be that which retains its original color; that which has been refined is almost useless.

borne in mind that the pressure of compressed air should in no instance exceed that of six pounds; a violent spray is always to be avoided.

In the many letters of inquiry which I have received the question has invariably been asked as to where these special instruments may be obtained. I therefore state, in conclusion, that the A. M. Leslie Surgical Instrument Company, of St. Louis, make a specialty of these instruments, and that the care with which they are constructed has always given me satisfaction.

Headquarters Division of the Missouri, Chicago, December, 1888.

## REPORT ON A CASE OF CEREBRAL ABSCESS.

*Read before the Kalamazoo Academy of Medicine, July 24, 1888.*

BY RUSH MCNAIR, M.D.,  
OF KALAMAZOO, MICH.

On July 6, I first visited Mrs. W. She complained of a severe, dull pain in the hepatic region; pains shooting up behind the left scapula and into the left shoulder; and frontal pain. She had had one slight chill. Her pulse was 110, and full; her temperature 100°; her tongue clad in a dirty, yellowish coat; her bowels constipated; her urine of a reddish hue.

An arterial sedative, an anodyne, and an alterative followed by a saline cathartic gave her such relief that the following day she went about her usual household labors and walked over two miles to do some trading.

On July 8 she applied to my colleague, Dr. Osborne—her symptoms much the same as already recorded. Dr. Osborne's prescription of a vigorous alterative again brought her relief.

On July 14, upon call, I found her suffering from frontal headache and desultory thoracic algias. Her tongue betokened no marked pathological condition. Her pulse numbered 70, and was soft in character. She stated that the frontal pain diurnally came on in the morning. I prescribed acetanilid, in 6-grain doses so long as the pain should last, and an antiperiodic dose of quinine sulphate. Her husband informed me the same evening that the "headache powders" had quickly stopped the pain, that she was comfortable, but desired that I should visit her in the morning.

The next morning, July 15, her temperature, at 10 o'clock, was 99½°; her pulse 84, and soft; her eyes were suffused and congested. She complained of a very severe pain over her left ear and in her forehead. Her bowels having become constipated, she was given an alterative cathartic, and for the rest continued the medication of the previous day. At this time I noticed slight errors of sense perception, but attributed it to the hemi-

The next day, July 16, she early had free alvine dejections and during the forenoon enjoyed immunity from pain, ate with relish and went about the house. Suddenly, at 1:30 P.M., she complained of faintness. Unconsciousness and spasm successively followed.

I saw her at 3:30 P.M. She was unconscious; her right hand closed; right forearm in violent clonic spasm; her eyes widely dilated and responding feebly to light; her pulse 130, and tense; her axillary temperature 99°; her respirations 36. I administered morphine, bromide of potassium and digitalis. By 9 P.M. she was free from spasm and had recovered herself to the greatest extent that she at any time attained. Her then condition was: pulse 100, and soft; temperature 99½°; pupils symmetrically varying from extreme dilatation to pin-head contraction; complete loss of control over the right upper extremity; amnesic aphasia<sup>1</sup> and bradyphasia; perception active; her expression dazed and melancholic; reflex action in the paralyzed side limited; otherwise vital phenomena were apparently intact. My diagnosis was intracranial hæmatoma.

Of the woman's history I had no knowledge, save that she was the mother of four living children and was asserted to be an unusually arduous and painstaking worker. Her age was 32 years, and her appearance denoted at least ordinary physical vigor. Her previous health was said to have been excellent. She had never required the services of a physician except at her confinements—about which there was nothing remarkable, except at one instance twins were born, of whom one was dead.

Dr. Osborne visited the patient with me in the evening, and his prescription of a small dose of morphine combined with chloral and bromide of potassium, twice repeated during the night, secured for her peaceful sleep.

In the morning of the following day, July 17, her objective condition was much the same. At times, however, for brief periods, she was almost maniacal. There having been no action of the bowels an alterative was exhibited—followed by hourly teaspoonful doses of magnesium sulphate until copious catharsis was induced.

The paresis gradually extended. By the third day following the convulsion complete aphasia, complete right hemiparesis and incontinence of urine and fæces had resulted. The temperature ranged from 99° to 100°; the pulse varied—never exceeding 110, and at times, for a considerable period, falling to 50 beats a minute; the respiration rate rose to 26 and became slightly stertorous. Except when aroused her right eye turned out—producing divergent strabismus. Her face took on a cyanotic hue. Evidently, only surgical procedure could be of avail.

Dr. Bosman, who was requested in consultation

<sup>1</sup> Landois' Physiology, p. 730. Sec. II, note 2, lines 6, 7, 8.

and who until the termination of the case lent me fraternal sympathy and advice, united with Dr. Osborne and Dr. Snook in this prognosis. The consent of the family having been given, an operation was determined upon and the succeeding day, at 10 A.M.—the fifth day after the convulsion—was set as the time.

Her condition at the time of the operation was, in the main, as last described; any change therefrom being due to progressive paresis. The coma was more profound, control over the muscles of deglutition markedly impaired, cyanosis deepening, respirations stertorous. Her temperature was 99°; her pulse 60, and at fair volume; reflex actions in the paralyzed side not entirely wanting. Apparently, she could not live to exceed four days.

There were present at the operation, Drs. Mottram, Osborne and Bosman, who gave me generous and efficient direction and advice. The scalp was shaved and cleansed early in the morning and wrapped in cloths wrung from a 1:600 sublimate solution. For the reasons that the paralysis was of the right half of the body, that the severest pain was located in the left frontal and left parietal regions, and that she employed her right hand in writing (although in all other manipulations she was said to be ambidextrous), the lesion was held to be of the left cerebral hemisphere. Chloroform was administered. With an aniline pencil I delineated the recognized lines of cranio-cerebral topography. The alveoli-condyloid, from the alveolar process of the sub-maxilla to the extremity of the occipital condyles; perpendicular to this line through the external auditory meatus was drawn the auriculo-bregmatic line; two inches behind the auriculo-bregmatic, and parallel with it, was drawn the post-auricular-bregmatic line; from the external angular process of the frontal bone a line was projected backwards parallel to the alveolo-condyloid; from the point of section of the auriculo-bregmatic and fronto-lambdoid was drawn the Rolandic line to the point of section of the posterior auricular bregmatic and the imaginary median bregmatic lines. Upon the Rolandic line as the major axis a parabola-like incision (curve downwards) was made, the integument and tissue beneath, down to the periosteum, were dissected back, likewise the periosteum was reflected. The trephine was applied over the Rolandic line as a diameter, the center of which nearly coincided with the mid-point of the Rolandic line.

Upon removing the button of bone the dura mater presented a normal appearance. The finger recognized no abnormal centrifugal pressure. Going below, a second button of bone—its centre in the Rolandic line and its margin intersecting the first aperture—was removed. Here, also, the dura presented a normal appearance. I punctured the dura and enlarged the opening with a blunt-

pointed bistoury. Introducing a blunt probe and keeping between the membranes, I explored the circumtiguous regions. A section of the membranes was made, but the cortex cerebri revealed to the eye and finger no pathological condition.<sup>2</sup> In the opinion of the surgeons present there were absolutely no local pathological appearances that would suggest or justify a further search. Reluctantly we abstained from further dissection, cleansed out the wound, laid a drainage of shreds of sublimate gauze, introduced two stitches, dusted on iodoform, and completed the dressing with sublimate gauze, absorbent cotton and a recurrent capital bandage.

She had taken the anæsthetic kindly. Her pulse continued slow (50 per minute) and full throughout the operation, which lasted about one hour. Immediately consequent on the operation, her perception and intellection were improved—a result of the slight hæmorrhage which had occurred, and of the encephalic anæmia produced by the anæsthetic.

Late in the evening the pulse grew more rapid and weak, respirations increased in frequency and became more stertorous, pupils contracted, coma progressive. She died nineteen hours after the operation.

*Autopsy* twenty-eight hours after death: present, Doctors Mottram, Osborne, Bosman and Snook. Rigor mortis was established. The cadaver presented a well-nourished appearance. A large lune of the calvaria having been lifted, the dura mater presented a normal appearance. Upon removal of the meninges the cerebrum also presented an appearance free from pathological conditions. The blood that filled the external cerebral veins was dark blue in color. Upon section there was found occupying the interior of the anterior third of the left cerebral hemisphere, an unencapsulated abscess, having flaccid irregular walls and containing about 1½ ounces of greyish-yellow pus, not fetid, and free from cerebral detritus. In places the abscess wall was within ⅛ of an inch of the surface. The abscess in its backward progress had encroached upon and eroded the centres of speech and of motor dominance over the right upper extremity. The posterior wall of the cavity was almost directly beneath the margin of the anterior superior quadrant of the first aperture. Had I thrust the probe or aspirating needle about ¼ of an inch downwards and forwards into the cortex, I would have entered the cavity. No other pathological condition was revealed by the post-mortem examination.

*Remarks.*—No theory of etiology was formed prior to the termination of the case. Two ante-mortem conditions have been since elicited which furnish possible origins, viz.: (1) a left suppurative middle otitis of a year and a half ago, which

<sup>2</sup> Vide *Am. Journal of the Med. Sciences*, Vol. xcvi, No. 1, p. 39, last lines, for a case similar in lack of visible lesion.

had readily yielded to antiseptic irrigations; (2) a constitutional specific disease, accompanied by typical manifestations, of twelve years' standing, which had received in its early stage approved treatment by a regular physician.

This may be classed with those cases of cerebral abscess to which E. C. Spitzka<sup>3</sup> refers as "varying from the latent form to forms with obscure general symptoms, whose recognition is impossible, or at best a matter of conjecture." Among other ways, the case is noteworthy by reason of the unannounced local magnitude of the lesion; by the precipitate onset of the paresis; by the similitude of the symptoms to those caused by intra-cranial hæmorrhage. It is noteworthy, also, perhaps, as furnishing contributory evidence to prove the accuracy with which encephalic lesions may be located, and adding force to the query,<sup>4</sup> to what extent is a surgeon justified in exploring the cerebrum for lesions non-traumatic, when the removal of a button of bone and section of the meninges reveal a normal appearance of the cortex?

## MEDICAL PROGRESS.

**TREPHINING IN MEDIASTINAL ABSCESS.**—At the meeting of the Medical Society of London on Oct. 15, MR. CHARLES A. BALLANCE read an interesting paper on a case in which the gladiolus sterni was trephined for pus pent up in the anterior mediastinum. The patient, æt. 35, was admitted into St. Thomas's Home on August 31, 1887, complaining of a discharging abscess over the front of the upper part of the chest, accompanied by constant and severe pain and great tenderness along the breast bone; also of fever, anorexia, loss of strength, and want of sleep. There was a history of inflammation of the lungs two years before; for three months there had been mid-sternal pain, and a lump had formed, into which an incision had been made and much pus evacuated. This was followed by a discharging sinus, which, on admission, was found to lead down to bare bone at the left second costo-sternal articulation, and the probe could be passed still further into a space behind the gladiolus. The sternum itself was acutely tender on palpation, and was the seat of constant dull, aching pain. Another swelling had formed over the left fourth, fifth, and sixth costal cartilages, and the discharges from the old sinus was less copious than usual. Two days after admission the lower swelling was incised, and the old sinus laid freely open. During the next five days rigors occurred, and it was decided to explore behind the sternum for pent-up pus. Two trephine holes were made,

and the intervening portion of bone cut away with forceps. The bone removed was found permeated by pus, and on looking into the anterior mediastinum a layer of thick creamy pus was seen on the front of the pericardium; this was carefully syringed away, and much carious bone was then scraped by means of a Volkmann's spoon from behind the sternum. Finally the wound was irrigated with sublimate lotion, packed with wet sublimate dressing, and covered with a dry dressing of the same character externally. The patient made a rapid and complete recovery, the sternal opening becoming filled in by fibrous tissue. Mr. Ballance was not aware of any case in which treatment had been applied to the posterior surface of the gladiolus. He took it from the first that the illness of the patient two years before had been puerperal or septic in origin, and had left some focus of disease in the interpleural space. By scraping the posterior surface of the gladiolus he could not hope to eradicate all the germs of the disease, and the completely successful issue of the case was, he thought, in no small degree due to the constant association of the diseased surfaces during convalescence with corrosive sublimate. The sternum had been trephined for abscess or foreign body in the mediastinum, for paracentesis pericardii, and the operation had been suggested in order to facilitate the ligation of the innominate artery. The two most prominent symptoms of mediastinal suppuration appeared to be dyspnœa and constant severe pain.—*Lancet*, Oct. 20, 1888.

**THE SURGICAL TREATMENT OF PURULENT PERICARDITIS.**—The successful case related by DR. DICKINSON at the last meeting of the Clinical Society will again direct attention to the treatment of purulent pericarditis by free incision and drainage, whilst the record of the case described by Mr. Parker at the same meeting will serve to show with what care the operation must throughout be performed that it may be successfully accomplished. Dr. Dickinson's is now the third published case treated by incision and drainage that has recovered. Notes of the two former cases were given in a paper read before the Royal Medical and Chirurgical Society, in 1883, by Dr. S. West, and published in vol. xlvii of that Society's *Transactions*. The first case was one of Professor Rosenstein, the patient being a boy aged 10; the second case was that of a boy aged 16, treated by Dr. S. West; and now this third case (Dr. Dickinson's) was also a boy, whose age was 10. Many fatal cases have besides been recorded, so that the operation may not be lightly undertaken. Purulent pericarditis, however, is usually so fatal a disease that severe measures may be justifiably employed for its treatment; and, although the physical signs which accompany it do not always enable the physician to

<sup>3</sup> Pepper's System of Medicine, vol. v, p. 799.

<sup>4</sup> The question was brought up by Dr. H. B. Hemenway, before the Kalamazoo Academy of Medicine, and discussed by its members.

diagnose with certainty between it and serous pericarditis, it is always possible to undertake a puncture for diagnostic purposes. With regard to this especial point of the diagnosis, it is to be noted that in purulent pericarditis a friction-sound is usually absent; but, the diagnosis having been settled by the exploratory puncture, and treatment by incision and drainage determined upon, the place of puncture must be settled. It is usually recommended to make the incision in the fourth or fifth left intercostal space; but in Dr. Dickinson's case the fifth right space was chosen by Mr. Rouse, the operator. Mr. Godlee at the meeting exhibited some drawings showing the relation of the internal mammary arteries to the edge of the sternum in children, from which it appeared that if the operation is done very close to the sternum the vessel of the side selected is very apt to be wounded; and he recommended that the vessel should be cut down upon and tied before the pericardium is opened. Dieulafoy recommends the fifth left space, about one inch from the edge of the sternum, as the best site for puncture with the aspirator. The purulent pericardial sac being opened, and the fluid drawn off, the relief to the patient is usually at once extreme; the pus should then be allowed to drain away through a tube until recovery ensues. The drainage was facilitated in Dr. Dickinson's case by the patient being placed face downwards in bed. The elasticity of the pericardium further tends to empty its cavity. Altogether, it is allowable to hope that a fair chance of success will attend this operation in the future when it is undertaken with full antiseptic precautions.—*British Medical Journal*, Dec. 1, 1888.

**BAVARIAN PLASTER JACKET FOR FRACTURED SPINE.** MR. T. R. HUMPHREYS says: In a recent case of fracture of the mid-dorsal region of the spine, the result of an attempted suicide, the patient becoming unmanageable, it was determined to put her up in a plaster jacket. On the third day after the accident, with the help of two nurses from the Hampstead Nursing Association, we set about it as follows: We took two pieces of house flannel, one  $2\frac{1}{2}$  yards long,  $\frac{3}{4}$  of a yard wide; the other about 2 inches less in width, and 40 inches in length. We passed the longer piece under the patient in the same way as a draw-sheet; it reached from the acromial process to the lower part of the sacrum. The two sides were now brought together in the middle line in front, and sewn as close to the skin as possible. The axillary portion was split, the edges pared, and shoulder straps attached. Next, the extra pieces of flannel in front were split in about eight pieces, nearly down to the stitching, and the alternate pieces tied together round a clothes prop, cut about two inches shorter than the bed, so that it could be lifted straight up without danger of

knocking it against the bed. The strips were carefully tied, so as for them all to be of the same tension when the weight came on them, and the patient was then lifted clear off the bed without pain or inconvenience. I omitted to say that the lower limbs and the head were supported by a towel tied in a similar manner round the pole, which was then braced up to another one, which had been previously placed on the head and foot rails. The second piece of flannel was then dipped in the plaster mixture and applied to the first piece, muslin bandages wound round the whole, passing through the spaces left in front by the alternate strips of flannel alone being tied. It became necessary a few days later to send her into hospital, as she grew unmanageable, and she made the journey with the greatest comfort in a greengrocer's cart to a hospital, about three miles away.

It is advisable to sew the shoulder straps on to the back part, before placing it under the patient. It is hardly necessary to point out the advantages and comfort of this plan of treatment.—*British Medical Journal*, Dec. 1, 1888.

**GUAIACOL.**—Guaiacol is a highly refractive, colorless liquid, with an aromatic smell, slightly soluble in water, readily so in alcohol and fixed oils. The statements made by Sommerbrodt and Fraenkel as to the benefits derived from the administration of creasote in phthisis led Sahli to try guaiacol, which has advantages over creasote in that it is of definite composition, and has a less unpleasant taste and odor. Sahli prescribed it thus:

R. Guaiacol puriss. . . . . ℥xv to ℥xxx.  
Ad. destill. . . . . ʒvj.  
Sp. vin. rect. . . . . ʒvj.

A teaspoonful to a tablespoonful two to three times a day after food, in some water.

The solution should be kept in a colored bottle, as exposure to light causes the deposition of a resinous substance.

Sahli likewise administered the guaiacol in cod-liver oil. He found it improve appetite, loosen and diminish expectoration, besides ameliorating general discomfort and relieving pain.

Schüller caused his phthisical patients to inhale the vapor of a watery solution of guaiacol, and gave, in addition, extract of guaiacum-wood in pills. He states that his patients improved under this treatment.

Fraentzel (*Deutsch. Med. Woch.*, 1888, No. 7, p. 138) has used guaiacol in more than a dozen cases. He considers it the active constituent of creasote, and recommends the following formula:

R. Guaiacol . . . . . ʒijss.  
Tr. gent. . . . . ʒi.  
Sp. vin. rect. . . . . ʒvij.  
Vin. xerici . . . . . q. s. ad Oj.

One tablespoonful two to three times daily, in a wineglassful of water. He strongly advocates its use.



Horner says he has employed guaiacol for four years at the General Hospital at Zwickau in the treatment of tuberculosis. He gives it in pills containing about three-fourths of a minim, commencing with one thrice daily after food, and gradually increasing the number of pills to ten in a day. Under this treatment, combined with careful diet and hygienic precautions, he thinks he has seen complete cure of cases of phthisis when not far advanced, and improvement even in those of long standing. In many cases the appetite improves, the bacilli decrease, the cough and fever and expectoration diminish; night-sweats disappear, and the patients improve in strength. In some cases no distinct effect follows, but the drug never produces any untoward results. Most patients take it very well, and only a few object to it.—*Therapeutic Gazette*, October 15, 1888.

**THE ACTION OF ANTIPYRIN IN MENSTRUAL COLIC.**—The well-known reflex inhibitory action of antipyrin, as determined by Demme and Sée, led Dr. WINDELSCHMIDT (*Medicinisch-Chirurgische Rundschau* September 1, 1888) to employ antipyrin by means of enemas of 30 grains in severe cases of cramp and colic during menstruation. It is stated that it proved to be an excellent sedative in such cases, its action ordinarily occurring within half an hour, although in some cases the injection had to be repeated after twelve hours. In two cases especially referred to, where, after nearly every very well-known method of treatment had failed to prevent most violent pains and colic lasting through the entire eight days of menstruation, injections of antipyrin in the morning and evening produced the most wonderful success; ordinarily this relief was accompanied by narcotic effects, the patients falling asleep and waking entirely free from pain; no unfavorable action, with the exception of profuse sweating and frequently slight ischuria, were ever observed. For prevention of collapse a glass of wine is ordinarily administered.—*Therapeutic Gazette*, Oct. 15, 1888.

**ELECTRO-PUNCTURE IN PARENCHYMATOUS GOITRE.**—Dr. H. WEINBAUM, Kovel, Russia (*Vratch*, No. 27, 1888), describes two cases of soft goitre permanently cured by electrolysis. The treatment consisted in galvanic electricity, applied for from ten to fifteen minutes at a sitting, and supplied by a battery of 20 cells connected with two golden needles, which were thrust several millimeters deep into the tumor at two diametrically opposite spots. Only moderately strong currents were used. In all, 150 sittings were made in the course of eight months. The tumor gradually dwindled away. When seen lately, about a year after the end of the treatment, the patient was in flourishing health; not a trace

of the swelling could be detected. In the second case only a slight tumefaction about the right lobe remained after 50 sittings. Dr. Weinbaum tried the same plan also in a case of dense fibrous goitre, but failed to obtain anything beyond a trifling diminution of the cervical circumference, though more than 200 sittings had been made.—*Annals of Surgery*, October, 1888.

**PECULIAR EYE SYMPTOMS IN ASSOCIATION WITH ERYTHEMA NODOSUM.**—MR. BICKLE, of Mount Barker, South Australia, records several cases in which, during the course of an erythema nodosum, phlyctenulæ appeared on the conjunctivæ, running an acute course and disappearing in about ten days. He had at the time no cases of phlyctenular or catarrhal ophthalmia. He has not found any notice of such a concurrence having been observed before. The sole quotation bearing on it is one from Meyer, of Paris, who says: "The concurrent appearance, either before or after its commencement, of cutaneous eruptions of the eyelids or of the surrounding skin, such as eczema or zoma, seems to point to phlyctenular conjunctivitis as an exanthematous disease of the mucous membrane depending on the ciliary nerves."—*The Australasian Medical Gazette*, August, 1888.

**WOUND OF THE CERVICAL SYMPATHETIC.**—ISRAEL relates a case of excision of a cervical tumor, in which the symptoms of paralysis of the sympathetic were produced by the operation. A man of 57 years of age was suffering from a large cancerous growth involving the glands and adjacent parts of the neck. After the large vessels and vagus had been carefully separated from the growth, it was found to be impossible to entirely free the sympathetic, and a considerable piece of it was excised. The patient recovered from the operation, but the moment after its performance the following symptoms were observable: contraction of the pupil, and diminution of the ocular aperture, followed the next day by redness of the ear and corresponding side of the face, and considerable swelling of the right (corresponding) side of the tongue. The pulse was in no wise affected.—*Centrbllt. f. Chir.*, 1888.

**FÆCAL FISTULA OF THE UMBILICUS.**—M. PEDENAT has successfully treated by electrolysis a case of fæcal fistula of the umbilicus. The patient had formerly suffered from intestinal obstruction. Seven sittings completed the cure.—*L'Union Médicale*.

Dr. GALEZOWSKI (*L'Union Médicale*, Feb. 16) recommends the following ointment to relieve the pain of neuralgia: R. Menthol, 0 gr. 75 centgr.; cocaïn., 0 gr. 25 centgr.; chloral hyd., 0 gr. 15 centgr.; vaselini, 5 grams. M. ft. ungt.

## THE

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## SALUTATORY.

"Whoever thinks a faultless piece to see,  
Thinks what ne'er was, nor is, nor e'er shall be."  
POPE.

In assuming editorial charge of this Journal, I prefer to make no promise now, but to let the manner of performance tell its own story, and take the place of previous promise. I am fully aware of the great responsibilities of the task, and of the great interests of the Association to be upheld by THE JOURNAL; but the fact is recognized that the strong and active coöperation of the members of the oldest, largest and most successful Medical Association of America, will make the work easy, and in proportion to that coöperation, THE JOURNAL will correspondingly benefit the Association.

The relative value of THE JOURNAL to its membership will depend upon the faithfulness with which it mirrors the existing state of medical knowledge as taught and practiced, and I therefore ask for the indulgence of the Association, frequent articles from the members, and their coöperation in increasing the membership.

The Association should double its membership in the next year, and it could be done easily by each one bringing in an additional member by application; all that is needed to make THE

JOURNAL, as great as any in the world, is to bring up the numbers to the maximum. The British Medical Association now has nearly 15,000 members, and when the total number of physicians in the United States is considered, it will be seen that at a comparatively low estimate the American Medical Association should have 20,000 members.

Let THE JOURNAL and its readers then mutually work to the attainment of that desired result, and the glories of the past history of the Association may be far eclipsed by its future. Let us remember that in union there is organized strength, and with equal pace and elbows touching march on with patriotic and fraternal spirit to the attainment of the object sought.

JOHN B. HAMILTON.

## THE RETIREMENT OF DR. DAVIS.

The voluntary retirement of DOCTOR DAVIS should strike none with surprise. He has well earned at the hands of the American medical profession his many honors, and now he has arrived at an age, when life is no longer necessarily a warfare, and the peace he desires is his by right.

When one has passed his three score and ten years in constant work, he has the right to engage himself during the remainder of his life in such pursuit of enjoyment as is most congenial to him, and most free from care. He has not retired from his medical school, or his practice, and he will continue to perform much more labor than most men; but it became a question with him what particular care would most relieve him were he free from it, and so he chose to consign the management of THE JOURNAL, now on a firm and enduring basis, to other hands. He has had many evidences of the love and esteem of his professional brethren, but none which have not been fairly won.

To recount the record of his services to the American medical profession is almost to write the history of the profession itself. As an active and aggressive reformer from the time he read his thesis in 1837 to his recent arguments relating to medical education, he is without an equal



in the profession. He is affectionately known as the "Father of the American Medical Association," because at the meeting of the New York State Medical Society in 1845 he offered the resolution which resulted in the holding of a National Convention of Delegates from Medical Colleges and Medical Societies of the United States. "In November of the same year, he published an article outlining the purpose and scope it was deemed important that the National Convention (called for May, 1846) should recognize in its organization. He also furnished information on the subject to Medical Journals that noticed the call, and conducted an extensive correspondence with influential medical gentlemen in almost every State in the Union. In the spring of 1846 he published an article on the "National Medical Convention." He had however outlined his views as to the Convention in a letter written from Binghamton in 1845.

In Medical Journalism his hand has been an active one. "His association with the *Northwestern Journal* began in 1855,"<sup>1</sup> and he founded the *Medical Examiner* in 1860 the successor of which is to-day one of our most valued contemporaries. It was consolidated with the *Chicago Medical Journal* and is the well-known *Chicago Medical Journal and Examiner*. The foundation of THE JOURNAL of the Association, now conceded to be about the only Medical Journal in America which goes everywhere, will make an interesting story, which we hope to have the pleasure of presenting to its readers from the pen of Dr. Davis at no very distant day. In the meantime while all his friends unite in congratulations on his long and useful life, the Editorial Staff of THE JOURNAL hope to be not far removed from his wise counsel, and in view of the results of his labors, we feel like heeding the Scriptural injunction "Let not him that girdeth on his harness, boast himself as he that putteth it off."

#### THE YELLOW FEVER EPIDEMIC OF 1888.

A special volume on the yellow fever epidemic of 1888 is now in course of preparation by the Supervising Surgeon-General of the Marine Hospital Service. It will include the following special reports, and will be prefaced by an introduction

by the Surgeon-General. It is hoped that the volume will be issued early in February.

The following is a plan for the volume on the epidemic of yellow fever, 1887-8:

1. The Fever at Key West, 1887, by J. Y. Porter, M.D., Captain and Assistant Surgeon U. S. Army, etc.
2. The Fever at Tampa and Plant City, Palmetto and Manatee, by John P. Wall, M.D., President Hillsborough County Board of Health.
3. The Fever at Jacksonville, by J. Y. Porter, M.D., etc.
4. The Fever at Fernandina, by J. W. Ross, M.D., Surgeon U. S. Navy.
5. The Fever at Gainesville, by Wm. Martin, M.D., Assistant Surgeon U. S. Navy.
6. The Fever at Enterprise, Green Cove and McClenny, by J. L. Posey, M.D., Acting Sanitary Inspector M. H. S.
7. Camp Perry and the Inspection Service, by W. H. H. Hutton, M.D., Surgeon U. S. Marine Hospital Service.
8. Observations on the Diagnosis and Treatment of Yellow Fever, by John Guit  ras, M.D., Passed Assistant Surgeon M. H. S.; C. Faget, M.D., Acting Medical Officer in charge of the yellow fever camp; and Sollace Mitchell, M.D., Physician to the Sand Hills Hospital.

This will give a very comprehensive report, from persons actually engaged in the work, and all reports on the fever at special places will include an account of the measures taken by local authorities and the Government, as well as the history of its introduction and spread, and will be of great value to the subject of epidemiology.

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#### PUBLIC MISREPRESENTATION OF CONGRESS.

"The absent and the dead are always wrong." This old saying received a new illustration at the meeting of the American Public Health Association in Milwaukee. The Secretary of the Board of Health of Illinois, read a paper in which he held Congress up to ridicule for its refusal to pass a bill to resuscitate the National Board of Health, while at the same time it had offered a prize of \$100,000 for a yellow fever cure. We are told by one of our contemporaries that this officer grew both eloquent and facetious while he "scored Congress," and that the audience applauded the sentiment with great unanimity. The fact is, Con-

<sup>1</sup>(Dr. J. M. Toner) in Biographical Encyclop  dia of Illinois.  
<sup>2</sup>J. M. Toner. Ibid.

gress never offered any such prize; a bill was introduced by a Senator because some "crank" asked him, and it was referred to a Committee where it still sleeps. It has not been *considered* by the Committee, much less reported, and it has a chance of becoming a law as infinitesimal as some of the schemes for the utilization of out-of-town sanitarians, most of which appear under an alias, and all of which have more or less eloquent, facetious and energetic public functionaries to urge their passage.

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#### EDITORIAL NOTES.

DR. F. V. FLOOR, of Youngstown, Ohio, died Dec. 12, aged 52 years. He was a graduate of the University of Pennsylvania.

THE Bill to "regulate appointments in the Marine Hospital Service" passed both Houses of Congress just before adjournment. It now only awaits formal engrossment and signature to become a law.

SENATOR CALL, of Florida, has introduced a joint resolution which was referred to a Senate Committee, giving thanks of Congress to the medical officers engaged in the work of suppressing the yellow fever epidemic in Florida.

THE MEDICAL TIMES, of Sacramento, California, Dr. J. H. Parkinson, Editor, is to commence the year 1889 with an increase in the number of its pages; a reduction in price to \$2 per annum; and a change of name to *Occidental Medical Times*.

THE STIMULUS OF ASSOCIATION.—With twenty thousand members, the Association will have such power as to make itself felt in all public matters in which the profession are interested. Let therefore all hands unite in strengthening the Association. Let it grow in usefulness by increasing its domain.

THE ILLINOIS STATE BOARD OF HEALTH.—The movement of certain secular papers of Illinois against the State Board of Health, to which reference was made in a recent number of THE JOURNAL, is not deserving of support or sympathy from any member of the profession. The Board has evidently attempted to carry out the law in good faith, and should therefore be warmly sustained. The abolition of the State Board of

Health would be a public misfortune, not only to the people of Illinois, but to those of certain other States, where Boards of Health are having a hard struggle for existence. The personnel of the Board might be improved, but that is a question altogether foreign to that of its entire abolition.

NOVEL CASE OF DROWNING.—It is reported that a man well under the influence of alcoholic liquor recently went into a saloon in Trenton, N. J., and called for a glass of beer, which was given him on a table at which he was seated. He was soon observed to be leaning forward upon the table as if in a sleep or stupor. "When the barkeeper tried to arouse him, half an hour later, it was found that he was dead, his nose being immersed in the liquor in such a way that respiration was completely stopped." Many cases have been reported of persons having been drowned in but little depth of water, but this is the first case reported of a man drowning himself in a glass of beer.

CATTLE DISEASE FROM SMUTTY CORN.—State Veterinary Surgeon Atkinson, of Milwaukee, has been called to investigate a cattle disease that appeared recently in the northern part of Jefferson County, Wis. The cattle are taken suddenly, and die in a short time. It is his opinion that the disease is caused by feeding the cattle smutty corn, of which there is an abundance. Farmers who picked out the smutty corn before feeding have no sick stock. It is well known that the eating of smutty corn by cattle causes abortion. The cases are probably examples of acute ergotismus, if we may apply this term to affections caused by maize smut.

AN INTERNATIONAL YELLOW-FEVER COMMISSION.—Mr. Phelan, of Tennessee, has introduced a Bill in the House of Representatives, "to provide for the appointment of a board of yellow fever commissioners to investigate the sanitary condition of foreign infected places, and to provide for the coöperation of Spain and Mexico." The Bill limits the operation of the work to two years. There are to be five members, of whom one each to be detailed from the medical corps of the Army and of the Navy, two from civil life, and the Surgeon-General of the Marine Hospital Service to be *ex-officio* Chairman. They are authorized to employ a microscopist, two clerks,

and a topographer. It is further provided, that Spain and Mexico, shall be asked to appoint Commissioners to coöperate. No action has yet been taken on this Bill except to refer it to the Committee on Commerce.

**SULPHUR FUMES IN DISINFECTION OF VESSELS.**—The amount of sulphur dioxide required for the proper fumigation of the holds of vessels, and the best means of obtaining it, have been subjects of recent letters to the Surgeon-General of the Marine Hospital Service by P. A. Surgeon H. R. Carter and Assistant Surgeon J. J. Kinyoun (weekly abstract of sanitary reports).

A larger percentage of  $\text{SO}_2$  than is obtained by the ordinary pot or open furnace method is necessary. Dr. Carter says: "It would seem that the most perfect combustion (of the oxygen, I mean, for the sulphur is in excess), would be accomplished by a hot blast forced through tuyères (or a pipe perforated with small holes might do better), through molten sulphur, or projected with some force on the surface of molten sulphur."

Dr. Kinyoun states that air containing 10 per cent. of  $\text{SO}_2$  proved germicidal to all spore producing micro-organisms that he experimented upon, the time of exposure being between twenty-four and ninety-six hours, but that  $\text{SO}_2$  in any strength had failed to kill the spores of anthrax.

Dr. Kinyoun erected an experimental furnace for the evolution of  $\text{SO}_2$ , upon the principle of a reverberatory furnace. The furnace was rectangular, the perpendicular being about three times greater than the horizontal diameter. Three sides were of brick, the fourth was a closely fitting iron door. The inside consisted of a series of shelves, one above the other, for holding the pans of burning sulphur. The shelves were made insufficient at their right and left sides alternately, thus leaving air spaces and causing a column of air, which was forced in by means of bellows at the bottom, to pass over each shelf with its pan of burning sulphur before reaching the space above.

The top was provided with a pipe for conveying off the gas and an aspirator for measuring its percentage. Repeated experiments gave from 14 to 16 per cent. of  $\text{SO}_2$  at a temperature of  $21^\circ \text{C}$ ., while ordinary burning of sulphur in a closed space at the same temperature gave only 6 per cent.

The principle brought out in the above experi-

ment is to be practically used in the construction of the new disinfecting vessel which is being constructed for the Marine Hospital Service at Chan-deleur Island.

## SOCIETY PROCEEDINGS.

### Obstetrical Society of Philadelphia.

*Stated Meeting, Thursday, November 1, 1888.*

THE PRESIDENT, T. M. DRYSDALE, M.D.,  
IN THE CHAIR.

DR. L. J. HAMMOND reported a case of  
PYOSALPINX.

N. J., æt. 22 years. Had one child three years ago. Since that time she has not felt well, having frequent attacks of pain in the pelvic region, confining her to bed for weeks at a time. About nine months ago she had a hæmorrhage from the uterus lasting three weeks, followed by a purulent discharge with severe pain and great tenderness of the abdomen, especially low down, necessitating her remaining in bed two weeks. After this time she resumed her occupation, that of a laundress, until four weeks ago, when the pain became so intense she was again obliged to go to bed, where she remained one week without attendance. At this time I found her with a temperature of  $100^\circ$ , pulse of 120, abdomen tympanitic and so very tender she could not bear the weight of my hand upon it, together with menorrhagia. Digital examination was deferred until the next day, owing to the great distention of the bowels with feces, which naturally increased the pain. Upon examination per vagina, I found a uterus very much enlarged, and bound down firmly posteriorly, together with a large boggy mass on the right side, which was very sensitive to touch. An immediate operation was advised, but was delayed, owing to the absence of relations, until October 18, when with the assistance of Dr. J. M. Baldy, the abdominal cavity was opened, and a large abscess with pyosalpinx was removed from the right side, with great difficulty, owing to extensive adhesions. Several small pus pockets were ruptured during the removal, and about an ounce of pus was discharged. The left ovary was not removed, it being apparently healthy. After thorough irrigation a glass drainage tube was inserted, and was replaced on the fourth day by a rubber one, which was removed in twenty-six hours. It is to-day just two weeks since the operation and the patient is well. At no time did the temperature rise above  $99\frac{1}{2}$ .

DR. J. M. BALDY said that it had been stated

in the society by a member, that he had never seen pus in a tube primarily. The specimen presented was interesting in that connection, as there had been pus in the tube as a primary condition. There was not pus present then as the specimen had been cut open, and had been for a long time in alcohol. There were two sacs in the ovary, one contained pus, and the other a blood clot as large as a walnut.

DR. M. PRICE, in answer to a question, whether the matter contained in these abscesses was really pus or not, said there could be no question but that it was pus. He was quite sure that it had been examined under the microscope.

DR. B. F. BAER thought that he was the culprit referred to by Dr. Baldy. In the discussion of this subject before the society, last winter, he was reported as having made the above statement, but he had been misunderstood. What he really did say was, that in his experience primary pyosalpinx was a rare disease; that in the uterine appendages which he had removed, the condition was an inflammatory one, involving the tubes, ovaries and pelvic peritoneum, which had resulted in gluing or matting together the organs, but that he had failed to find pus contained in the tubes and nowhere else; that in the pus cases with which he had met, there was a condition of abscess in which it was difficult to tell whether the disease had originated in the tube, in the peritoneum or in the cellular tissue, so extensive was the destruction of the tissues and organs in these cases. It would be a very sweeping statement to say that primary pyosalpinx never occurred, and he did not wish to be misunderstood as making it. His experience during the past year confirms the views which he then expressed.

DR. HAMMOND said there was no question about there being pus in this tube. The tube was larger than his thumb, and thoroughly distended with pus.

DR. GEO. BOYD exhibited a

#### MULTILOCLAR OVARIAN CYST.

The ovarian cyst which I have to show in connection with the short history of its growth, I think is of some interest.

Mrs. D., æt. 27 years, primipara, I was called to see early last July. I found her advanced in pregnancy. She seemed well with the exception of the fact that both legs were cedematous. This had caused her some alarm. The urine, by analysis, being excluded as a cause of this swelling, it was attributed to venous obstruction by pressure. She fell in labor August 7, and with an easy delivery, gave birth to a female infant, weighing eight pounds. I applied the binder, as is always my custom. The uterus was well contracted and its outline regular. There was no evidence of any tumor. On the eleventh day,

she was out of bed and doing her household duties, feeling well, although the lochia was greater than it should have been. At the expiration of two weeks I left her doing nicely. September 19, about three weeks after my last visit, I was called again to see her. She stated that she was loosing blood, and also that the stomach was swollen. She complained of pain in the left ovarian region. An examination showed a tumor the size of the uterus at the third month of gestation. It occupied nearly a central position, more to the right of the median line, on the opposite side from where she complained of pain. In three weeks more it had attained twice the size and showed marked fluctuation. Dr. Noble saw the case with me, and together, after a careful examination, we diagnosed a thin walled cyst (ovarian or ligamentary). It continued to increase in size rapidly, and now was above the umbilicus. The pain she complained of was growing more severe, and she was loosing flesh. October 18, a little more than two months from her lying-in, with the assistance of Drs. Kelly and Robb, I removed the growth. The operation was of no unusual interest; the cyst was tapped and delivered; there being no adhesions, and the tumor having a good pedicle, it was easily removed. It sprung from the right ovary. The patient has made a good recovery. Her temperature was at no time lower than 99° Fahr. So little was the shock that at the end of the first week, the baby, who had been nursing, was returned to the breast. The points of interest in the case are these: 1. An ovarian tumor, not complicating labor. 2. The operation performed during lactation. 3. An ovarian cyst containing nearly a gallon of fluid, still remaining unilocular.

DR. WM. GOODELL gave the history of a case of

#### DOUBLE INTRALIGAMENTARY CYSTS.

The woman, æt. 30 years, had been infected with syphilis from which she had suffered with constitutional symptoms. Two tumors had been discovered a year ago. Her health had failed rapidly and œdema of the upper and lower extremities were present. The womb was so closely adherent to the tumors and they were so immovable, that a diagnosis of one multilocular intraligamentary cyst was made. At the operation performed at his private infirmary, October 15th, an intraligamentary cyst of each ovary was discovered, which demanded long and difficult enucleation. They were both extirpated without leaving a pedicle behind. The broad ligament capsules being thin, were torn in shreds. These were trimmed and tied and many bleeding vessels were secured. Deeply seated oozing, from vessels which could not be reached were thought to have been controlled by Monsel's sol. Two other

small cysts were now discovered, apparently wholly independent of the ovarian cysts. As they were too deeply seated and too adherent to the rectum on one side and the cæcum on the other, they were not removed, but were freely incised and cleansed. Many intestinal adhesions had also to be severed in the removal of the larger cysts, which weighed approximately, ten pounds on the left side and five on the right side. After careful and repeated flushings of the abdominal cavity, a large drainage tube was put in. Within two hours, serious hæmorrhage took place and much blood escaped out of the tubes; but as it gradually grew less the wound was not reopened, and in twelve hours it ceased. Five days after the operation, when Dr. Goodell was about to take out the tube, high fever set in preceded by chills, and the tube was therefore not removed. On the next day a deep seated abscess burst and its foetid contents escaped through the tube, poisoning the air of a large room for several days. Later a rubber drainage tube was inserted. Two weeks and a-half have now elapsed since the operation and the woman is doing well. That is to say her temperature and pulse are natural and the abscess has nearly healed up, but her convalescence is retarded by a diarrhoea of long standing, which he attributes to specific disease of the intestines, for which he is giving potass. iodide. He has never heard of a surgeon being infected by syphilitic virus during the performance of ovariectomy, yet he did not see why such an untoward result might not happen; so during and after the operation he was careful to cleanse his hands thoroughly and repeatedly with a sublimate solution. Indeed for several days after the operation, he was quite uneasy about himself, lest he had been inoculated.

DR. GOODELL also showed the *left ovary* of a young girl, 22 years old, which he had removed and which had *two pus cavities* in it. No history of peritonitis could be elicited, yet the pelvic cavity was crossed and recrossed with bands of adhesion as tense as fiddle strings. Many of these pelvic bands and other close adhesions of the ovary proper had to be broken during the operation. The right ovary could not be discovered anywhere, although very careful search was made by both Dr. Goodell and Dr. W. L. Taylor, and although the pelvic floor was pushed up by the hand introduced into the vagina. A small body as large as a bean, which was possibly a rudimentary ovary, was felt in the right broad ligament, but it was so obscured by organized exudation and fastened down by adhesions that no effort to remove it was deemed proper. All the pain was referred by the girl to the left ovary. Dr. Goodell thought that in this case the lesions had come from some exanthematous disease of childhood or from latent peritonitis, just as adhesion bands are often found in the pleura, when no

history of pleurisy can be found. The girl in this case was a virgin and he felt very confident that gonorrhœal infection could be excluded. Owing to a constant oozing of blood the drainage tube was kept in for eleven days, a rubber one being substituted for the glass one at the end of the first week. Not any complications have retarded her convalescence.

DR. B. F. BAER presented a specimen of

#### BROAD LIGAMENT CYST,

removed by enucleation, which had been tapped seven times in seven years.

Miss A., was sent to him by his friend Dr. S. S. Smith, of Driftwood, Pa., and entered his private infirmary on October 3rd. She is single; 44 years of age; had enjoyed good health until eight years ago, when she found that her abdomen was increasing in size. She also complained of a peculiar pain, "pulling down in the pelvis," as she called it. Her abdomen continued to increase in size, until she had such difficulty in breathing, that she could not walk upstairs without great dyspnoea occurring. She was tapped on Aug. 2, 1882, and four gallons of fluid "as clear as spring water" was removed. She does not think that she had lost any flesh during the early development of the tumor. In nine months she was tapped again and three gallons of fluid removed. Between the first and second tapplings she lost considerable flesh. At about the same interval she was tapped again, and three gallons of fluid removed. She was tapped yearly since August 2, 1882—seven times in all—the last tapping occurring in April of this year.

Two or three years ago she began to flow more freely at her periods, until they became so profuse that she would flow as long as a month at a time. About the same time she noticed that there was a projection from the vulvar orifice which would become larger if she were on her feet and retained her water, and diminished in size after the bladder was empty. She presents an appearance of considerable emaciation and states that she is rapidly losing strength. Inspection shows the abdomen to be distended to about the sixth month of gestation and symmetrical. The abdominal wall is very loose and flaccid. There is a circular scar midway between the umbilicus and pubes; and on questioning the patient, she explains that four years before she had a "running sore" which continued about two years. The suppuration followed one of the tapplings and took place from the puncture. Palpation of the abdomen shows a loose walled cyst in the cavity, which does not seem to be adherent to the abdominal wall. Fluctuations marked. Inspection of the vulvar orifice shows a cystocele about the size of a duck's egg, and also an inflammatory swelling of the left labia majora. The vaginal touch shows the cervix to be near the orifice of the vagina

and to be quite small. The lower part of the tumor is felt very distinctly posteriorly and low down in the pelvis. The uterus is pushed forward and to the right, and occupies a position out of the pelvis above the right groin. The sound passes through the center of the body last described to the depth of four inches and shows it to be positively the uterus. The tumor appeared to have pelvic attachments below the uterus as though it might be an intraligamentous cyst.

Operation October 6th, in the presence of Drs. T. M. Drysdale and Chas. P. Noble, and I was kindly assisted by Drs. J. M. Baldy and J. S. Baer. Incision two inches, and when the tumor was exposed to view it was found to be firmly adherent to several places, to the anterior abdominal wall and to the point opposite the scar (seat of former suppurating-fistulous opening above noted); it was found that the fimbriated extremity of the Fallopian tube, formed this latter attachment. It was this attachment of the extremity of the tube, which had probably caused the elevation of the womb, as that organ seemed to be suspended from the point noted, the Fallopian tube extending from this point downward over the tumor to the uterus, forming a portion of the wall of the tumor. It was also noticed that the outer and upper wall of the tumor was apparently closely adherent to the intestines. So closely related was the tumor to the intestines that it was necessary to carefully select a place where puncture could be made without wounding the bowels. About two gallons of thin fluid, rather straw-colored, was evacuated, when the cyst entirely collapsed. On attempting to draw it out it was found to be so deeply attached that it could not be withdrawn. The upper portion of the cyst wall seemed to consist entirely of the intestines which escaped through the incision when traction was made upon the cyst. They were hurriedly returned and the fingers now carried downwards towards the base of the tumor, where it was found that the entire pelvic peritoneum of the left side was lifted up, that is, the tumor was entirely subperitoneal and without a pedicle. A condition now presented itself which renders this case one of extreme interest. The base of the tumor was so broad, vascular, and so closely attached to the intestines, that to have begun to enucleate below would have been hazardous on account of the danger of rupturing the bowels, as well as from hæmorrhage which would probably have been great from opening of large blood-vessels. We determined that it would be best in this case to begin to enucleate at the point of puncture of the trocar, and it was found much to our satisfaction, that the cyst was readily separated from its outer or peritoneal coat. So readily was this done that it was unnecessary to ligate a single blood-vessel and the enucleation was finished within ten minutes. After the enucleation was completed the

entire peritoneal covering collapsed and disappeared. It contracted so quickly indeed as to make it difficult for me to find its cavity for the purpose of irrigation, which was next done. The thick Fallopian tube was next ligated and cut away, but the tumor itself was entirely without a pedicle and was monocystic as you will see in this beautiful specimen. After irrigating, the wound was closed around a small drainage tube and the patient returned to bed, showing some evidence of shock from the operation, from which she soon rallied. The drainage tube was removed within 36 hours and the patient has recovered. During the third and fourth days the urine was found to contain pus and blood, but on investigation it was found that it probably originated from a former cystitis. The bladder was washed out twice daily with carbolized water and she soon recovered from this condition.

In my experience this case is unique. The cases of broad ligament cysts requiring enucleation with which I have met, have been of such character as to require the application of many ligatures and pressure forceps to control the hæmorrhage during enucleation. Whether this is because I formerly began to enucleate near the base of the tumor, by breaking through the outer covering, or whether it is seldom that we meet with a tumor so easily enucleated as this one was, I do not know, but I lean rather to the latter view. My experience with this case, however, will lead me to endeavor, in future, to begin the enucleation high up, at the top and less vascular part of the cyst wall.

It was long ago pointed out by Bantock that, in broad ligament or parovarian cysts, the peritoneal covering could be readily separated from the cyst proper. This served to distinguish it from the cyst of the ovary, the outer wall of which cannot be separated from the covering beneath it. While this was an intraligamentary cyst, it was not that form of cyst which is described by Doran as originating in the hilum of the ovary and containing papillary growths, several specimens of which I have exhibited to this Society.

DR. B. C. HIRST showed an

#### INTRALIGAMENTOUS CYST.

This specimen was recently removed by an operation performed by Dr. T. H. Bradford, at which I had the pleasure of assisting. The tumor sprang from the right broad ligament and was attached deep down in the pelvis. Its blood-vessels were enormous. It was covered by that curious muscular-looking capsule which makes these tumors resemble an enlarged uterus. There was furious hæmorrhage at the lower attachment when an attempt was made to ligate the pedicle. This was easily controlled by a long pair of catch forceps passed in the dark. The entire tumor was removed and the stump cauterized. The operation lasted three hours and the woman almost died on

the table. She recovered from the immediate effects of the operation, but died three days later. The mass consists of a papillary growth internally and a capsule which shows features referred to by Dr. Goodell in a meeting of the Society last December, and that is the seeming rottenness of the tumor wall in spots, which makes it exceedingly difficult to remove these growths without tearing them and allowing some of their contents to escape into the peritoneal cavity. This happened in the present case. Had the woman lived it is probable that the peritoneal surface would have been infected by this papillomatous matter.

DR. R. P. HARRIS gave the case of the late Dr. Emeline Cleveland, who had become infected from an ovariectomy and had a syphilitic sore develop on her wrist, which ultimately was the cause of her death.

DR. JOSEPH PRICE said the case reported by Dr. Goodell illustrated beautifully the primary and the secondary value of the tube; the signal of hæmorrhage and the cure of the abscess which formed later. The woman would have perished from the hæmorrhage or the abscess had the tube not been used. In regard to the virulence of living pus, he might say that he had twice been poisoned in abdominal work. Virchow had called attention, long since, to the virulence of living pus. He differed entirely from Dr. Baer as regarded the nature of the cyst which he had presented. It was clearly a parovarian cyst. It belonged to that class of tumors to which we applied the minor methods of treatment without knowing exactly what the tumor was. In this case you may strip off the capsule and still have a cyst. This could have been done more readily if the specimen were a recent one. The other day, he removed an enormous parovarian cyst, and in a few minutes was able to convert it into two cysts. Such tumors are always parovarian and the enucleation is easy.

DR. BAER had already separated the two coats of the cyst. He would confess frankly that, after reading Doran and other authors on this subject, he did not yet exactly understand the difference between these tumors.

DR. SLOCUM asked Dr. Goodell what, in his opinion, was the origin of the two cysts in his case.

DR. GEO. SHOEMAKER thought that, in using the bichloride solution to wash out incised and punctured wounds, it did not penetrate deeply. He should hesitate to place dependence on it unless the wound were large enough for free irrigation and the solution was strong. A solution made of alcohol and bichloride was the best, as the solution would penetrate to all depths. Free bleeding should be encouraged and the wound should be enlarged.

DR. H. A. KELLY thought that Dr. Baer had developed an interesting point in not using any

ligature. He had himself operated in four or five cases in which no tying was required. One of his cases was a pus sac and a small ovarian cyst. After enucleating the mass nothing but oozing points were left. He attributed this to the fact, as he had before called attention, that, after adhesions had formed, the original blood source had withered away, and the mass was supplied by blood from the surrounding parts. In the case of another cyst closely resembling this, he had to use a greater number of ligatures than he had ever before used. Every point seemed to bleed and required repeated ligature. This case he drained, and she recovered after he had opened a pus sac from the vagina. He now seldom used a drainage-tube—never when he could avoid it. He did not fear clean blood and clean fluid, if not in too great quantity. He had had no trouble for a time in his hospital, since he had adopted this method.

DR. J. M. BALDY called attention to a point mentioned by Dr. Baer. He (Baer) stated that the Fallopian tube was attached near the umbilicus, at the point of a scar produced by one of the tapping punctures. This is another illustration of the dangers which all now realize. The tube had been perforated by the aspirator and had become attached to the abdominal wall near the umbilicus. It had here discharged pus for a long time. The fistula which had been left could not be accounted for until the operation. The result of this accident might easily have been most disastrous.

DR. WM. GOODELL remarked that, in reply to the gentleman who asked what those other cysts were, he must confess that he could not explain them satisfactorily. Their presence was something new to him. Whether or not they were due to the syphilitic element he was unable to say. He knew that one was wholly independent of the other two cysts; he was not so sure of the second. He was disposed to attribute the abscess to one of these cysts taking on inflammatory action subsequently.

With reference to the distinction between parovarian and broad ligament cysts, he must confess that he had labored under the same difficulty that Dr. Baer had. The term broad ligament cyst was a generic one, for there are differences in broad ligament cysts. In a parovarian cyst the two layers can be readily stripped from one another. In an ovarian cyst, on the other hand, every escaping Graafian follicle has caused a scar which rivets the two tissues together, so that in such a cyst the two layers cannot be separated. Of broad ligament cysts we have two typical varieties: one the true intraligamentary cyst, usually containing papillary growths, and attributed by Doran to the hilum of the ovary; the other, of which he thought Dr. Baer's specimen was an illustration, is a cyst starting from the horizontal or vertical tubes of the parovarium. These are very beautiful trans-



lucent cysts, over which the fimbriæ of the Fallopian tube run and spread like the fronds of seaweed. They also contain a limpid fluid. A third broad ligament cyst is the hydatid of Morgagni. There are other cysts to which Doran has referred, but he did not understand fully his description, and he thought that Doran himself does not clearly understand them, from his description. Others describe other broad ligament cysts. They claim that cysts will form here as elsewhere. For instance, we have retention cysts in the labia from enlargement of the glands of Duverney, and we have other cysts not connected with this gland. These are attributed by some to serous accumulations in the interspaces of areolar tissue. In order to simplify matters, he divides these cysts into two sets, the true parovarian cysts and the true intraligamentary cysts, liable to contain papilloma. These intraligamentary cysts try him more than any other kind. The deep and tedious enucleation and the sprouting vessels beyond reach make anxious work. The adhesions also obscure the landmarks, and are very perplexing. About five weeks ago he tackled one of these cysts, and in endeavoring to enucleate it, he tore a hole in the bladder, into which three fingers could be introduced. The same accident happened to him several years ago, before he had ever heard of an intraligamentary cyst. Both cases fortunately recovered. He sewed up the wound in the bladder, in this last case, with a continuous catgut suture. He then took the portion of broad ligament which had been stripped up and united that over the bladder, so that he had two sets of sutures, like the Czerny-Lembert suture in wounds of the intestine. He introduced a self-retaining catheter, and there was no further trouble, except that the eyes of the instrument at first became clogged by the blood in the bladder. In the former case a good deal of blood accumulated in the bladder. This he was able to dislodge by injecting a solution of pepsin, which seemed to digest and break up the clots.

DR. B. C. HIRST reported

#### SIX CASES OF PUERPERAL INSANITY.

In the last eighteen months he had seen six cases of puerperal insanity, an unusual experience for an obstetrician, since, according to Fordyce Barker, this condition only occurs once in 400 cases of labor. Of these six, four were illegitimately pregnant; two had mania, while four presented melancholia, apathetic appearance, and seemed indifferent to all about them. Three of the women recovered their reason, two are apparently hopelessly insane, and one died from a septicæmia which was associated with, and perhaps caused the mental state. One case was sudden in its onset, violent in its manifestations, but short in its duration. The woman was told, two weeks after confinement, that her perineum was ruptured

and must probably be sewed together; she almost immediately became maniacal and remained so for about three weeks. A correct idea of the most common variety of this affection, of the prognosis and best means of treatment, cannot be obtained from an obstetrical practice, which must necessarily be small, but must be sought for in records of such cases presented by competent observers who, especially if in charge of asylums, have to deal with a large number of them. Studies of more than 800 of these cases by Clark, Macleod and Wigglesworth, have recently been published. From them it appears that the maniacal form of the disease is the most common; that a large majority of the cases recover, usually within six months; that where death occurs it is commonly traceable to sepsis, which is so often associated with puerperal insanity, although a few cases die from maniacal exhaustion; that the best treatment is the Weir Mitchell rest cure. Heredity plays a most important part in the etiology of this disease; very often the subject is mentally and physically depressed. It seems not very uncommon for the chorea of pregnancy to develop into insanity; this happened in one of my cases.

## FOREIGN CORRESPONDENCE.

### LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

*Disinfecting Power of Tobacco Smoke—Sir Morell Mackenzie—Increase of Cancerous Disease—Injurious Methods of Teaching—Cambridge Medical School—Hepatic Surgery—Saccharin—Dr. Gamaleia—Trial of a Medical Man for false Insurance Certificate.*

Mr. V. Tarsinari has been making some experiments with regard to the alleged or rather the "superstition" of the disinfectant powers of tobacco smoke. Smoke from a cigar or cigarette was drawn over a piece of linen, which had been dipped into fluid containing microbes. When the cigar was finished the linen was at once placed in a tube containing a liquid in which such germs could breed and multiply. The experiment was repeated with a number of different microorganisms, including those of cholera, anthrax and pneumonia, and of course check experiments were also made in which smoking was omitted. In every case the effect of the smoke was greatly to delay the growth of the organisms, and in a few cases it was entirely prevented. Mr. Tarsinari proposes at an early date to follow up his investigations in the hope of isolating that part of the smoke to which its germicidal property is due, and so to possibly add a new disinfectant to the long list of those we have.

Sir Morell Mackenzie delivered an address on



"Speech and Music" to the members of the Edinburgh Philosophical Institute in the Music Hall, Edinburgh. The president, in introducing the lecturer, said the institution was a magnet that attracted to Edinburgh all that was best in the intellectual life of the Nation. Sir Morell Mackenzie, in his preliminary remarks said, he accepted their invitation with some hesitation, for when he received it he was at Charlottenburg in a position of unexampled difficulty and responsibility. He could not say that he was particularly sensitive to criticism, but it was gratifying to him to find, that whatever others might say, in dear old Scotland his countrymen stood by him. At the close of the lecture a vote of thanks was cordially adopted to Sir Morell.

At the Royal College of Surgeons, Sir Spencer Wells stated that cancerous diseases were increasing in this country. The increase was continuous in the seven years after the last decennial period, both in males and females, but considerably greater in males. Deaths from cancer had gradually, from 1861, increased from 360 per 1,000,000 to 606 in England alone, and in Ireland the increase had been from 350 in 1877 to 430 in 1887. Sir Spencer urged the necessity for early operation, and the danger of inadequate, unnecessary or desperate operations, and compared the results obtained by so-called remedies of a secret character with the work of the surgeon.

Sir Douglas Galton in his address at the meeting of the Sanitary Institute and the Parkes Museum of Hygiene, recently amalgamated, said the present methods of teaching introduced by the Code relating to elementary schools, are injurious mentally, bodily and morally. In speaking of over-pressure, he said: In the very young a lesson of a minute may be all sufficient. Later of three minutes, five, ten, fifteen and so on to one hour, two or three. But to this there was a limit, and physiologists said, although the receptivity varies in different children according to difference of temperament, physical health and build, the receptivity at one time in all children ceases at the end of three hours. Sir Douglas Galton thought the education of a mental kind now being supplied will be imperfect, and may be dangerous, unless it be so combined with physical culture that a perfect or comparatively perfect health of body shall go with it.

As showing the growth of the Medical School at Cambridge University, in 1865 the number of M.D. and M.B. degrees conferred was 6, in 1875 it was 12, in 1887 it was 57. The University has furthered this increase by the foundation of new professorships in physiology, pathology and surgery, and of lectureships in other branches of professional study. Clinical lectures at Addenbrook's Hospital, first introduced by Dr. Paget in 1841, furnish the necessary element of practice. At the present time the largest number of under-

graduates on record are pursuing medical study at the University.

At the Medical Society of London, Mr. I. Knowsley Thornton gave some notes of his most recent operations in hepatic surgery. The first two were cases of abscess in connection with perforation of the gall-bladder, presumably by gall-stones, though the stones were not found. The third case was one of cholecystotomy, the gall-bladder being removed and the stones left in the common duct, from which afterwards they were expelled, there being considerable disturbance as they passed through the ileo-cæcal valve. The fourth case was one of ordinary cholecystotomy, the gall-bladder being sutured into the parietal opening and drained. The fifth was one of hepatotomy for hydatids of the left lobe of the liver. The last case was one of abscess in connection with perforation of the gall-bladder, stones being found both in the abscess sac and in the gall-bladder and cystic duct, 100 in all. Mr. Thornton drew attention to the danger of waiting when there were symptoms of impacted gall-stones on the advisability of free incision, and drainage in preference to aspiration on hydatids on cholecystectomy in place of cholecystotomy, on the function of the gall-bladder, and upon the irritant action of bile on healing wounds. With regard to the two first cases he brought forward where the stones escaped from the gall-bladder and became encysted, the first tube took about seven or eight weeks to heal up, and were at present quite well.

In a report on saccharin, although its medicinal value in certain special cases is admitted by Dr. Beaumetz; he protests energetically against its use in articles of food, as it retards the action of the gastric juice upon albumenoid substances, as well as the saccharifical use of starch by the ferment of the saliva phyaline. Some experiments prove that in some persons the prolonged ingestion of saccharin in small doses is followed by pains in the stomach and disturbed digestion. These symptoms ceased when the saccharin was discontinued and reappeared on its resumption. In Paris the Academy of Medicine has formally concluded that saccharin may not be regarded as a food, but merely as a medicament.

Dr. Gamaleia, the Russian Physician who declares that he has a method of inoculating for cholera, is in earnest. He has proposed to the French Academy that he should experiment with it upon himself, and after long hesitation his proposal has been accepted.

Prince Charles Theodore, second son of the late Duke of Bavaria, is a medical enthusiast. When a boy, his favorite amusements were chemistry and botany, and subsequently he studied medicine and surgery. The eye was his favorite specialty, and to the treatment of this organ, he to this day, diligently applies himself, seeing both

rich and poor patients, and acting in every way as a practitioner, even to taking fees.

A medical man, of Belfast, was tried at the Wicklow Assizes for defrauding an assurance company by certifying as a first-class life for insurance a man he examined, who died two months after of cardiac disease and dropsy. The prosecution contended that the existence of the disease was known at the time of the examination, and that he withheld this knowledge and certified falsely. The jury convicted and the prisoner was sentenced to six months' imprisonment.

## DOMESTIC CORRESPONDENCE.

Medical gentlemen writing to the Editor of THE JOURNAL will please conform to the rule requiring MS. to be written on one side of the paper, to take pains to write the names of persons and places legibly, and to send their own names as a guarantee of good faith.

### LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

*Lobar Pneumonia; an Analysis of Fifty-six Fatal Cases — Classification of Pneumonia — Complications, Diagnosis and Treatment of Pneumonia.*

Dr. Satterthwaite, the well-known pathologist, has recently presented to the Academy of Medicine a new study of lobar pneumonia, which was principally based on an analysis of fifty-six fatal cases observed by him. The paper was one of those which do not by any means show for what they are worth, as the expression is, but which in reality involve an immense amount of hard and conscientious work; and it will no doubt constitute a real addition to the literature of a subject which must necessarily always be of the greatest practical interest to the profession.

The classification which Dr. Satterthwaite makes of the principal types of pneumonia are as follows: 1. Acute lobar pneumonia; 2. secondary lobar pneumonia; 3. embolic lobular pneumonia; 4. bronchial lobular pneumonia; 5. the interstitial pneumonia of heart disease. Acute lobar pneumonia, he said, occupied a unique position in the catalogue of diseases; for both anatomically and clinically it was unlike any known affection. He objected to the designation of croupous pneumonia—as applied to it by some from the fact that fibrin is of very regular occurrence in the exudation which fills the vesicles—on the ground that croupous and catarrhal processes may be combined in any example of pneumonia, whether lobar or lobular, and may also be associated with certain chronic processes, such as phthisis or syphilis. This disease was first clearly differentiated in 1841 by Grisolli, a pupil of Lanis, and he thought that no work had surpassed his in the completeness of its clinical and anatomical details. It was the most common variety of pneu-

monia, and Dr. Satterthwaite's statistics sustained those of Fagge, which show that it is chiefly a disease of the male sex. When it originated in one lung the right was usually selected, and when both lungs were attacked the second lung was rarely involved until the affection in the first had gained some headway.

Having described the stages of engorgement, red hepatization, and gray hepatization, he went on to speak of the symptoms and the clinical signs. Fine crepitation, he said, while one of the most important early signs, was not a positively essential one; and occasionally it lasted the entire length of the disease. In referring to individual symptoms he said that in his cases pain in the side usually preceded the chill. In old people cough might be absent, and in two of his cases there was no expectoration whatever. In fifteen the sputum was either bloody, blackish, rusty, or greenish. Often groups of instances had been observed in which it was uniformly colorless throughout the disease.

Albuminuria was quite common, though not so frequently as in the interstitial pneumonia of heart disease; and he was convinced that if the urine received the attention which it deserved a nephritic implication would be found more often than now appeared from the statements of writers on this topic. His statistics, he said, showed a less amount of nephritic trouble than actually existed since his cases were all in hospital patients, who were often brought into the wards in a moribund condition, and it was manifestly impossible to secure the complete evidence on this point that was needed for statistical purposes. Yet they showed a percentage of 41, and in 5 per cent. of this total there was chronic kidney disease of long standing. In 8 per cent. only did it positively appear that there was no renal implication, as shown by clinical and post-mortem evidence; and there was distinct evidence of acute kidney disease in 36 per cent. of the cases. So far as the kidneys were concerned, however, we had more to fear from the evacuation of an old nephritis, when the damaged organ was suddenly called upon to do vicarious work for which it had little capacity.

As to the diagnostic value of fine crepitation, Dr. Satterthwaite believed that it was now generally admitted in the best quarters that this sign is heard not only in the usual types of pneumonia, but also in pulmonary phthisis and syphilis; or even in bronchitis, as Andral claimed. The pain in pneumonia, which most frequently referred to the nipple, and next to this to the base of the lung, he considered as due to pleurisy. The highest respiration met with in his cases was 64, and there was uniformly a high ratio between the respiration and pulse. Thus, while the pulse was never more than double the normal, the respiration was often three times the normal; and

in an average of seven cases was about twice the normal. The highest temperature in his cases was  $108^{\circ}$ , and at death the lowest,  $100.2^{\circ}$ . In ten the highest average temperature was  $104.3^{\circ}$ . The crisis usually occurred between the third and eighth days, or, more accurately, between the fifth and seventh days. His statistics showed that the fatal issue, if it came, might occur on any day of the disease (always within two weeks); but that the danger was greatest about the end of the first week, or, in reality, on the sixth day. This fatal day corresponded with the date at which the crisis occurred, according to most clinicians.

The immediate cause of death was usually heart failure, the heart muscle becoming exhausted from the prolonged and exhaustive work it had to perform, or, indirectly, through the influence of poisoned blood upon the nervous centres. In rare instances the respiratory nerves would yield, and respiration would stop, though the heart proceeded. Some late writers, like Ziemssen, thought exposure to cold a very infrequent cause of pneumonia; but if we noted the time of the year at which the affection was prevalent, we at once realized that it was a disease of the late autumn, winter and spring months. In 26 of Dr. Satterthwaite's cases 27 fell between October 1 and January 1, and only 7 in the remaining four months.

He thought there were at least two varieties of acute lobar pneumonia; the first being a sort of epidemic form, which might be called pathogenic, sometimes associated with diarrhoea or dysentery, where persons had been crowded together and compelled to inhale foul air. The second was due directly to cold; and there were probably other causes also. In speaking of the alleged bacterial origin of the disease he said it appeared that none of the observers who claimed to have demonstrated this had complied with Koch's law as to the determination of whether or not a given microbe was the cause of a disease, viz.: *first*, its successful culture apart from the body; *second*, its successful inoculation on the body, with the subsequent production of a pathological condition the counterpart of the disease in a given organ. Thus, he said, it would be necessary to show that a pure culture inoculated upon the blood remote from the lungs produced lobar pneumonia. Experiments, however, had almost always failed in this respect, and it had been found necessary to inoculate the lung tissue, where any foreign substance would, if injected, produce pneumonia. But in such experiments it was lobular, and not lobar, pneumonia that commonly resulted.

Pleurisy was a complication that was to be expected. The pleuræ were always involved when the inflammation reached the surface of the lungs; so that pleurisy was never absent, except in such rare cases as where the disease was central. A comparatively frequent complication was pericar-

ditis, which developed either by an extension of the diseased process or by a simultaneous implication. As to the mortality of pneumonia, he said it was profitless to give statistics on a general disease like pneumonia unless we knew, 1, the variety; 2, the decade of the patient's life; and 3, the general character of the attack. Lobar pneumonia had quite a different mortality rate from either variety of embolic pneumonia, the cardiac or the pyæmic. The rate was also probably different in childhood, in adult life, and in old age. Having given the statistics of various writers as regards mortality, he said that after a brief study of these, or any other statistics, it would be seen that their variation was to some extent a natural one; and though it was ostensibly true that the expectant plan was the most successful on the whole, still the results were by no means uniform in the hands of the same person.

Admitting, however, that these statistics were of value, Dr. Satterthwaite believed that we had evidence that the so-called expectant plan of treatment was the best. He thought that we had passed the period where it could be successfully shown that we could arrest the disease. We did, indeed, sometimes meet with cases of pulmonary congestion, in association with cardiac or renal disease or malaria, which presented some of the signs of lobar pneumonia; but the prompt relief by stimulants or antiperiodics taught us the nature of the congestion. The cause of death also indicated the obvious direction in which our main efforts were to be made. It was not so much towards reducing the temperature as towards maintaining the heart; next to obviating renal complications. Hence our clinical supplemented by our pathological data *did* point out the line of treatment. Dr. Satterthwaite doubted whether the high temperature in pneumonia was in itself a disease that we must attack and overthrow, and said that he had been led to believe by post-mortem studies that the use of antipyretics not only weakened the heart's action, but had some unfavorable action on the kidneys. It seemed to him that, since the introduction of the newer antipyretics, the renal implications had been greater than before.

Every case of acute lobar pneumonia, he thought, should be treated by itself, and the indications should be met as they arose. Hence the medical agencies that had from time to time met with favor had an appropriate field for their employment. He had often seen benefit from copious and repeated cupping in sthenic cases. In less vigorous persons he had seen relief follow cold water applications. In cases of defective action mercurials in large doses might give relief. In patients with weak hearts he had seen the case carried safely through with alcoholic stimulants; while in renal complications he had seen marked relief to the pulmonary symptoms caused by rem-

edies chiefly addressed to the kidneys. Reduction of temperature was indeed a relief to the patient, but it seemed to him that it was safer to accomplish this through the simpler remedies which caused diaphoresis, rather than by those which acted more promptly, but whose secondary effects were, to say the least, of doubtful value. Though high temperature was an alarming symptom, it was rather because it was an index of violent systemic disease than because of the body heat itself.

The concluding portion of the paper was devoted to secondary lobar pneumonia, a subdivision of the disease which Dr. Satterthwaite considered there was a positive advantage in retaining. In the nineteen post-mortem cases from which he had drawn his conclusions there was seen to be a line of phenomena which plainly indicated certain differences between the primary, or acute, and the secondary forms. In secondary pneumonia the ordinary clinical signs were either masked by the concurrent disease, or were so ill-defined that the pulmonary attack might pass unnoticed; and so it happened that sometimes, even in our best hospitals, this affection was first detected at the autopsy. The attention of the physician might not be directed to the pulmonary complication because the patient himself had not had his own attention directed to it. Such things happened with old people; or it might be that a physical examination of the chest was impracticable. He had observed the following antecedent conditions in secondary pneumonia: Nephritis, alcoholism, phthisis, burns, rheumatism, fracture of the ribs, hypertrophy of the heart, pleurisy with effusion, and pericardial effusion. He had found it in contemporaneous connection with the following affections: Abdominal dropsy, pericardial effusion, gangrene of the extremities, bronchitis, syphilis, endocarditis, hydrothorax, and aneurism of the aorta. Neither phthisical or syphilitic processes had any apparent connection with the pneumonia and, in fact, all cases in which there was any suspicion of phthisis or syphilis as possible causes of the lobar pneumonia were thrown out of the computation. Secondary pneumonia seemed to be most common in winter, and no one of Dr. Satterthwaite's nineteen cases occurred between May 1 and October 1.

The disease was usually insidious, and the chill was frequently absent; probably not occurring in one-fourth of the cases. While the pain in the side might be absent and the difficulty in breathing not marked, the crepitant râle could be heard, as a rule. The temperature would rise rapidly, as in acute pneumonia, but it would average somewhat lower; though the temperature might not indicate the severity of the attack. The pulse also averaged lower than in acute pneumonia. Bronchial breathing and dulness might be the most decided symptoms, and they were the ones most commonly present in Dr. Satterthwaite's

experience; being noted in about 70 per cent. of the cases. The expectoration was apt to be scanty, and oftentimes afforded little help in the diagnosis. He had noted it in only about one-third of his cases; where it was either bloody, rusty or black. Renal symptoms were apt to be more prominent than in acute pneumonia. As indicating the difference in the type of this variety of pneumonia, there was found a decided tendency to suppuration.

The duration of secondary pneumonia was about the same as acute pneumonia, but the crisis was apt to come earlier, because the patient was already exhausted by the antecedent trouble. Hence, he found that out of 14 cases, 8 died within forty-eight hours, and that the period of the greatest danger was between the second and third day. The immediate causes of death were attributable mainly to the same three conditions which are prominent in acute lobar pneumonia, viz.: 1. heart-failure (in about one-half of the cases); 2. uræmia, and last and least, respiratory failure from the toxic influence of the unhealthy blood on the nerve centres. These facts, he thought, sufficiently indicated the proper line of treatment.

P. B. P.

#### "Deeper Brain Surgery."

*Dear Sir:*—With reference to your interesting comments on Dr. Keen's article in the *Medical News* advocating exploratory puncture and tapping of the cerebral ventricles, will you allow me to say this: The operation was, I believe, first suggested by Wernicke, and latterly again by Dr. Zenner, of Cincinnati.

Last spring I had a patient upon whom I made a diagnosis of cerebellar tumor. The intense pain, rapid development of optic neuritis and other symptoms led me to think it probable that there was pressure on the venæ galeni and excess of fluid in the ventricles. The idea of tapping them occurred to me, but in talking over the subject with Dr. Weir he was inclined to discourage it, considering deep punctures of the brain far from safe. The patient died. A tumor was found involving nearly the whole of the left cerebellar hemisphere and part of the middle lobe. *The ventricles were normal.*

Since then I have seen death produced in a case of cerebral surgery by deep exploratory punctures.

Yours very truly,

C. L. DANA, M.D.

50 W. 46th St., New York.

**Must Dentists who have the Degree of M.D. be Graduates of Dental Colleges?**

F. M. H. writes: I am a graduate of two medical colleges, but am, and have been practicing for ten years, the specialty dentistry. I

am going to move to Kansas and the Board of Dental Examiners say I can't practice unless I am a graduate of a *dental college*—I think the "greater includes the lesser," and will test my rights in court. I think a graduate of medicine has a perfect right to practice anything which is recognized as a specialty of medicine by the International Medical Congress. I want to know if you will give me an affidavit that the International Medical Congress recognized dentistry as a specialty of medicine and that many leading dentists met with us at the last session and took part in the discussions pertaining to their specialty, also, that you recognize it as such.

## NATIONAL HEALTH SERVICE.

### Marine Hospital Service.

The Secretary of the Treasury in his Annual report to Congress says concerning the Marine-Hospital Service: The Supervising Surgeon-General of the Marine-Hospital Service reports that during the year just passed there have been treated 43,203 patients, which is the greatest number of patients furnished relief in any year since the organization of the Service.

The receipts from all sources were \$496,441.69, and the expenditures were \$528,844.66, which amount was paid from the unexpended balance to the credit of this appropriation in the Treasury.

Better facilities for laboratory work and more room for storage purposes have recently been secured by the removal of the Bureau from 1419-1421 G street, N. W., to 1306-1308 F street, N. W., the Department having leased the latter-named premises. The lease began July 1, 1888, but, owing to the necessity of making repairs and alterations in the building, the store-room 1314 F street was occupied temporarily as a store-room and laboratory. The new location of the Bureau is a marked improvement over the old, but the necessity still remains for a building specially designed for the uses of the several divisions.

The Surgeon-General also recommends that a special laboratory for bacteriological work be established at this Capital.

A full statement of the sanitary work of the Bureau is made in his report. The passage of the law providing for the maritime quarantine stations is a great advance on previous legislation, and will greatly improve the sanitary defenses of the country. A circular has recently been issued by the Bureau concerning the treatment of foul ships which it is believed will, in the course of time, make a clean ocean-going fleet, as the extraordinary disinfection required in case of the second appearance of a vessel at one of our ports in a foul and unsanitary condition is, in effect, a

penalty upon her. The history of the calamitous epidemic of yellow fever in Florida is included in his report, and it gives me pleasure to state that the officers of the Marine-Hospital Service have performed the delicate duties intrusted to them with courage, skill, and enthusiasm. The depopulation of Jacksonville was mainly effected by means of the establishment of a refuge camp, the Surgeon-General proceeding to Florida for that purpose. It is believed that the new legislature of Florida will pass a law creating a State board of health, which will obviate many of the difficulties contended with during the management of this epidemic, as it has been difficult to coöperate with so many boards of health, each having different regulations, scattered as they were throughout the State. For the prevention of the spread of the disease from one State to another, fumigation and inspection stations were established by regulations of August 28, which have required little modification to the present time. It is my opinion that inter-state commerce should be so regulated as to strip railroads and other common-carriers of their power to convey disease from one State to another, and that the regulations to be framed in accordance with such law should be enforced by National authority. I transmitted a draft of a bill to the chairman of the Senate Committee on Epidemic Diseases, which was introduced (Senate 3467), but as yet no action has been had upon it. The passage of the bill seems to me a public necessity.

The Surgeon-General recommends the establishment of hospital buildings at New York and Philadelphia and that an additional medical officer be detailed for his office.

## BOOK REVIEWS.

RECUEIL DES TRAVAUX DU COMITÉ CONSULTATIF D'HYGIÈNE PUBLIQUE DE FRANCE ET DES ACTES OFFICIELS DE L'ADMINISTRATION SANITAIRE. (Tome 17. Année 1887). Paris: Imprimerie Nationale, 1888.

This volume is not less interesting than its predecessors, and it shows great labor on the part of the Committee, and incomparable skill on the part of many of the reporters on special subjects. The report is transmitted to the Minister of Commerce and Industry by the distinguished M. Brouardel who is also Dean of the Faculty of Medicine of Paris.

The work of the Comité d'Hygiène was for the year reported concentrated on two groups of questions.

1. The modes of propagation of epidemic diseases.
2. The suppression of adulterations of food.

The work on the first group of questions include an account of the Sanitary Service, Rules for the Suez Canal, Rules for the troops in the extreme Orient, sanitary measures to prevent the importation of yellow fever, and disinfection on board of ships.

Among the many interesting things in this volume we notice that in a letter of Inspector-General Proust to the Minister, dated June 16, 1887, he asks that the French agents in foreign countries where yellow fever is prevalent shall make monthly reports, and in case epidemic shall telegraph the information. In support of his request, he says :

"The Government of the United States is already of this opinion, it imposes on all its consuls and consular agents the duty of furnishing by each mail a sanitary bulletin. The bulletins are very circumstantial : In case of epidemic they are sent to the Minister of War at Washington office of the 'general health,' where a *résumé* is imprinted and sent to sanitary agents on the seacoast of the United States and this each week (we require but a monthly bulletin)."

The notion of consuls reporting to the Secretary of War, instead of to the Secretary of State is a little out of line, and as well the title given the Supervising Surgeon-General, but it is good evidence of the far-reaching influence of the United States. It is pleasant to know that the request of Dr. Proust was granted and that their consuls were directed to report "*allee samee*" as those of the United States.

Under the heading of "*Médecine et Hygiène Publique*," there is published in full the decree of June 4, 1887, by President Grévy, recognizing the Institute Pasteur as "an establishment of public utility."

The objects of the Institute are thus set forth :

1. The treatment of hydrophobia after the method of Pasteur.

2. The study of virulent and contagious diseases.

The means which the Pasteur Institute proposes to employ are,

1. The creation of establishments comprising chambers for inoculation, laboratories and their adjuncts.

2. Scientific missions from France to foreign countries, for the study of virulent and contagious diseases.

3. The publication annually of the results obtained in the establishments dependent on the Institute, in particular those concerning the treatment of hydrophobia.

4. Eventually the institution of prizes destined to encourage, outside of the Institute, all those experiments in the same direction as those having their inspiration inside the Institute.

M. Pasteur was made First Director during his life.

Among the accounts of epidemics we notice an interesting one on the sweating sickness which prevailed in several departments in June and July, 1887.

The report is worthy a place in the library of any physician, and to the practical sanitarian it is invaluable.

THE MEDICAL BULLETIN VISITING LIST OR PHYSICIAN'S CALL RECORD. Philadelphia: F. A. Davis. 1889.

This is a novel list and an unusually convenient one. It is so arranged that a month's work (both records of visits to be and that have been made) can be kept on one line. There are additional pages for obstetrical and bill records, etc. In front there is a small amount of text, of very useful information. The book is well made.

#### VISITING LISTS.

The Medical News Visiting List, the Medical Record Visiting List, Lindsay and Blakiston's Visiting List, Leonard's Physician's Day-Book, and the New York Medical Journal Visiting List, for 1889, have been received.

### MISCELLANEOUS.

DR. J. F. HARTIGAN, writing to the Surgeon-General on the epidemic at Enterprise, Florida, says :

"Had the town been in good sanitary condition, it is clear that the disease, after its introduction, could not have made such rapid headway. But a tour of inspection through it revealed a criminal violation of ordinary hygienic rules. Over its territory are scattered numerous ponds and marshes, generally without an outlet or an attempt at one. Perhaps the most pernicious of these is just west of the hotel. In it is dug a pit about fourteen feet by ten, lined with boards, which has been a receptacle for the hotel sewerage. The intention was to regularly mix this with dried muck and use as a fertilizer, but it had not been properly carried out, and the matter for a long time kept leaking through, as was evident from the surrounding exhalations.

I found the streets and vacant lots generally overgrown with weeds and decaying vegetation ; here and there were scattered heaps of all kinds of garbage ; the drains were obstructed, and there was no system of disinfection or removal of excreta. Perhaps the worst death-trap that was ever found in a Christian community existed here. In the court-house yard the jail was situated ; almost adjoining the latter a privy-house was built over a cesspool 10 feet square and 4 feet deep, with a 6-inch pipe communicating. Not only was this intended for the excrement from the jail, but it was an open place where the passerby entered. On account of the porosity of the soil, the fluids percolated, and there was hardly ever an overflow. Two and a half years ago this pest-hole was established by authority ! having been permitted to exist since. Of course it was a subject for early attention. After making a bonfire of the building, and free disinfection, with a dummy-engine I removed in closed barrels to the suburbs more than 1000 gallons of filth, and filled the opening with dry sand. The evil consequences of the condition described were noticeable as far back as June, and in September, when the county-seat and jail were removed



to DeLand. A prisoner named Riley, who was confined only two months, was a strong, robust man when committed, and on transferring him he was but a shadow of his former self. Another man, after five months' incarceration, was turned loose, and has since been a physical wreck. The pale, wan features and languor of the jailer's family attested plainly the havoc made among them. The reason given for the nuisance not being abated was because it was in the court-house grounds, and was county property. The town authorities and health board frequently protested against it, but the commissioners postponed action from time to time. It is but one illustration of the feebleness of county boards of health in Florida. They are mixed boards, and are all appointed by the Governor, generally on the longest list of recommendations."—*Weekly Abstract of Sanitary Reports*, Dec. 21, 1888.

**THE SENSATION OF LIGHT.**—New-born infants possess but feeble perception of light. Exposing a baby to the action of twilight five minutes after birth, Preyer observed the eyes to open and shut so that the palpebral fissure at times measured 5 millimetres, and a little later the eyes were noticed to be wide open and the forehead wrinkled. Before the end of the first day it was evident from the play of the features that a difference in the intensity of light was appreciated by the babe. On the second day the eyes rapidly closed on bringing a candle flame near, and on the ninth day the head was energetically turned away from the flame, and the eyes tightly closed. The sensitiveness to light was greater in the waking state than immediately after sleep, so that the same object which at one time caused dislike at another excited pleasure. On the eleventh day, the infant showed signs of pleasure at the sight of a burning candle, and also from a bright curtain holder. On the tenth day, it was found that the throwing of a strong light on the eyes of the sleeping infant caused contraction of the orbicular palpebrarum. The pupils of new-born infants soon react to light, but are apt to vary much in size; they may contract to the diameter of 2 millimetres soon after birth. At the age of 2 months bright objects excite signs indicative of mirth.—*Lancet*, September 1, 1888.

**THE KANKAKEE ASYLUM.**—The report of the trustees of the Eastern Hospital for the Insane, at Kankakee, for the month ended June 30, 1888, has been published. During this period 607 patients were admitted and 2,131, from ninety different counties, were under treatment at the home; 162 were discharged as recovered, and 54 were much improved. There were 1,690 inmates when the report was prepared, and the average number of inmates during the period was 1,543, and during this time 149 died. Seventy-four per cent. of the inmates for the last four years have been there for periods greater than two years. From 65 to 100 inmates have been employed in industries helpful to the institution, and all the sewing, with the exception of men's clothes, has been done by inmates. The shoes of the inmates are kept in repair by two patients, and the needs of the hospital in brooms and caning chairs are met by patients. All the rugs, mats and socks used at the hospital are also made there. The cost of running the institution has been greater than it would have been if the establishment had been made large enough at first. It was originally built to accommodate 1,000 patients, and was afterward increased to accommodate 1,600.

**FROM WASHINGTON.**—The annual meeting of the trustees of the Washington Training School for Nurses was held Wednesday morning, Dec. 19, 1888, at the Nurses' Directory, 1226 O street, Dr. H. D. Fry, the President, presiding, Dr. George N. Acker, Secretary. The resignation of Mrs. Miranda Tullock was received, in accepting which the trustees passed a resolution thanking Mrs. Tullock for her active and useful service in behalf of the school, extending over the past eleven years, she having

been one of its incorporators. The following Board of Trustees was then elected: Drs. H. D. Fry, George N. Acker, H. L. E. Johnson, Col. M. M. Parker, James E. Fitch, Thomas Wilson, Mesdames J. W. Powell, A. J. Bentley, D. W. Prentiss, E. F. Andrews, M. V. Milburn, and Miss Lizzie Joseph.

The Washington City Dental Society has elected the following officers; President, Dr. R. H. Gunnell; Vice-President, Dr. George B. Welch; Recording Secretary, Dr. H. B. Noble; Reporting Secretary, Dr. H. M. Schooley; Essayist, Dr. E. R. Rust.

**YELLOW FEVER BACILLI.**—DR. JAMES E. REEVES, of Chattanooga, has been studying the tissue of the liver and kidneys from patients who died with yellow fever at Decatur, Ala., and has discovered a microorganism that closely resembles a specific germ. Dr. Reeves has sent mountings of these tissues to various bacteriologists in this country, and has had the bacilli photographed by Professor Delmoro, of the Ohio State University. A consultation of scientists will be held at Johns Hopkins University the first week in January, at which the microorganism will be examined and discussed.

**DR. I. T. RUSSELL** died at Winchendon, Mass., on Dec. 19, aged 70 years. He entered the army as a surgeon, and at the close of the war was honorably discharged with the rank of brevet-lieutenant-colonel. He was a member of the Masonic order and of the Loyal Legion, Vice-President of the New York Medico-Legal Society, and a Past Vice-President of the Massachusetts Medical Society.

**LUMINOUS BACTERIA.**—According to the *Naturforsch.*, Professor Pfluger and Dr. Tilanus have succeeded in cultivating, by Koch's method, the bacteria which produce the luminosity of sea fish. They have also been able to place them on a glass slide, which, in the dark, appeared thickly strewn with luminous points. Prof. Van Haren Noman has succeeded in photographing them.

**DR. AGNEW'S RETIREMENT.**—The medical students of the University of Pennsylvania will present to Doctor D. Hayes Agnew an oil portrait of himself on his retirement from the professorship which he has held for several years in the institution.

**THE PHILADELPHIA POLYCLINIC** has just established a three months special course in ophthalmology, which will include systematic didactic instruction and quizzing, with three hours daily of actual clinical work.

The professorship of obstetric theory in the Paris Faculty has been replaced by a professorship of clinical obstetrics.

**THE NEW JERSEY STATE SANITARY ASSOCIATION** met at Trenton on Dec. 8 and 9. A number of interesting papers on sanitary subjects were read.

**DR. GEORGE F. SHRADY**, editor of *The Medical Record*, was married on Dec. 8th to Mrs. H. E. Shultis.

### LETTERS RECEIVED.

Letters have been received from Dr. J. Berrien Lindsley, Nashville, Tenn.; Dr. G. B. Thornton, Memphis, Tenn.; Dr. Samuel N. Nelson, Boston, Mass.; Dr. J. H. Etheridge, Chicago; Oscar Oldberg, Ph.D., Chicago; Frank Billings, D.V.S., New York; Dr. Francis H. Brown, Boston, Mass.; Dr. Ephraim Cutter, New York; Mr. Wm. J. Dornan, Philadelphia; Dr. H. H. Smith, Philadelphia; Mr. R. D. Jackson, New York City; Dr. F. M. Harrell, Nauvoo, Ill.; Dr. Henry O. Marcy, Boston, Mass.

THE

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## ORIGINAL ARTICLES.

### TUBERCULOSIS CUTIS VERRUCOSA.

*Read in the Section on Dermatology, at the Thirty-Ninth Annual Meeting of the American Medical Association, May, 1888.*

BY GEO. T. ELLIOT, M.D.,  
OF NEW YORK CITY.

The discovery of the tubercle bacillus by Koch and the incontestable proof furnished by experimental inoculation that it was the cause of pulmonary tuberculosis, has acted as a powerful incentive to the study of disease from a bacteriological standpoint of view, and, leading to the study anew of many affections hitherto considered as of unknown origin or doubtful nature, has allowed many of them to be established upon a firm basis. One of the most important results of this method of study has been the discovery that affections, previously considered separate and distinct one from the other, were in reality only clinical manifestations of the same disease; that is, they were due to the same cause—a fact which was most brilliantly seen in tuberculosis as it occurs in the skin. In this organ of the body, the most varying clinical phenomena have been found to be dependent upon the presence of a bacillus, morphologically and in its effects identical with that one found in tuberculosis of the pulmonary or abdominal viscera, or of the bones, etc., and the constancy of its presence has not only identified these cutaneous processes with tuberculosis in general, but has also served to demonstrate the bond which unites them one to the other.

The forms in which tubercular disease of the skin manifests itself are clinically so different, that we may be allowed to review them briefly. Among them should be mentioned those ulcerations which occur in the latter months of general tuberculosis, and which are situated most usually in the neighborhood of the orifices clothed with mucous membrane. The rarest of the forms of tuberculosis cutis, they originate primarily as a red, dry and hard papule, which undergoes caseous or purulent degeneration, softens and, breaking down or being scratched, becomes an ulcer. It may also develop secondarily through inoculation of a small cut or scratch, or slight wound. In either case, the ulcer, once formed, runs a very

slow chronic course and never heals spontaneously.

Lupus in all its forms has also come to be accepted as clinical manifestations of tuberculosis cutis, since Demme<sup>1</sup> first demonstrated the presence of the tubercle bacillus in connection with it. Notwithstanding that, in its symptoms, it is so entirely different from the first mentioned form of this disease of the skin, and also from those to follow, still it corresponds with them pathologically. Besides, there can also be brought forward, in support of the tubercular nature of lupus, the repeated production of tuberculosis by experimental inoculation of a culture of the bacillus obtained from the affected tissues; the large percentage of deaths from tuberculosis of other organs occurring among those afflicted with lupus (Block,<sup>2</sup> 79 per cent.; Sachs,<sup>3</sup> 62.83 per cent.; Bender,<sup>4</sup> 62.3 per cent.); the frequent development of acute miliary tuberculosis after operative procedures made upon lupus, etc.

The large majority of those cases and of those cutaneous processes situated especially about the neck, which the older dermatologists called scrofula, scrofulous abscesses, serpigenous scrofulides, have also to be ascribed to the same cause as lupus. This form of tuberculosis occurs most usually in children and youths secondarily to tuberculosis of the lymphatic glands or of the bones or joints. When primary, it develops in the subcutaneous connective tissue and represents the so-called cold abscess or the gomme tuberculeux, formerly the gomme scrophuleux, of the French. All of these forms have been often enough demonstrated to be of tubercular nature by many successful inoculations, etc.

Separated from these in the manner in which they are acquired, but still belonging to the same disease and due to the same cause, are those clinical manifestations which can be traced more or less directly to infection from without, and which may be regarded as true "inoculation tuberculosis." In this category many of the so-called anatomical tubercles or verrucæ necrogenicæ are to be placed.<sup>5 6 7</sup> They occur most commonly upon the

<sup>1</sup> Demme. Berlin Klin. Wochschr., 1883.

<sup>2</sup> Black. Viertchft. f. Dermat. u Syph., 1886.

<sup>3</sup> Sachs. Ibid.

<sup>4</sup> Bender. Deutsch. Med. Wochschr., 1886.

<sup>5</sup> Richl. Centrblt. f. Chirurgie, 1885.

<sup>6</sup> Karez. Ibid. 7 Finger. Deutsch. Med. Wochschr., 1888.



hands and fingers of those who have to do with autopsies, anatomical material, etc., appearing as a small red papule, which quickly becomes pustular and then covered with a crust. In the course of a few weeks, if the crust be removed, the lesion is found to have become warty, and between the papillary prolongations small drops of pus may ooze out on pressure. Their growth is slow and they undergo involution in their central portions while enlarging peripherally. The lesions may disappear spontaneously or they may be followed by general tuberculosis.

Closely allied to the just described lesion and differing from it only in minor points is that form of inoculation tuberculosis first described by Riehl and Paltauf,<sup>8</sup> and to which they gave the name of tuberculosis cutis verrucosa. It is the one which interests us more especially in this paper, since the case to which I would call attention can most properly be regarded as corresponding to those described by them.

According to Riehl and Paltauf, tuberculosis cutis verrucosa occurs usually in healthy adults, who by occupation are continually in contact with domestic animals and animal products—as butchers, cooks, etc. It is observed most frequently on the dorsum of one or both hands, or of the fingers, or in the interdigital spaces, but seldom on the palmar surfaces or on the wrists. The lesion resembles somewhat a group of irritated warts or a lupus verrucosus, and varies in size from a pea to a silver dollar. They are round or oval, but may coalesce together and then have a serpiginous appearance. Each plaque is surrounded by a narrow erythematous zone, on which there may be small superficial pustules or crusts. The central portions are elevated and warty, and pressure causes the appearance of drops of pus, which well up from between the papillary outgrowths. Involution of the plaques takes place spontaneously, but it may be months or even years before it begins.

Microscopically it was found, that the appendages of the skin were unimplicated in the process, but that the morbid changes, which were those belonging to tuberculosis in general, were situated in the papillæ and in the upper portion of the cutis. Tubercle bacilli were quite abundant. The pus was found to proceed from subepidermal miliary abscesses, which did not contain any tubercle bacilli, but staphylococci.

The following case, which has been under my care, seems to me to agree so accurately with the description of tuberculosis cutis verrucosa, that I would record it as an example of that form of disease, due to the inoculation of the tubercle bacillus, notwithstanding that the source from which that bacillus was derived was not the same as was observed in the cases reported by Riehl and Paltauf.

M. F., a female, aged 70, a native of Ireland, presented herself at my clinic at the Demilt Dispensary on March 20, 1888. She is a widow, in good general health and looks younger than she really is. She has never had any disease of the skin before. Her husband died some years ago from phthisis and since his death three of her children have succumbed to the same disease. A fourth child, a young man, had an attack of pneumonia two years ago, which was followed by phthisis, for which he has been under treatment at the Dispensary. When examined, it was found that there was infiltration of the apex of right lung and formation of cavity. During his illness, and also subsequently, his mother had nursed him and washed his linen and the utensils used by him. She states that she first noticed one year ago the inception of the affection on her hands. It began as a small papule on the knuckle of the little finger, and one developed also on the first phalanx of the index finger of the left hand. The papule was round, somewhat elevated, elastic, pale-red in color and slightly squamous. These lesions grew larger and became warty in appearance, new plaques appeared on the dorsum of the hand and enlarging, coalesced together forming a large diffuse patch. The disease began about six months ago on the right hand. The papules appeared first on the knuckle of the little finger and shortly after on the wrist. Its extension took place in the same manner as it had on the left hand.

On examination, it was found that the primary lesion on the knuckle of the little finger was as large as a twenty-five cent piece and that involution had begun in the centre. There was still a slightly warty appearance there, but it had sunk in to a considerable extent. The more peripheral portions were, however, more prominent, warty, and typical. There was a marked increase in the horny epidermis covering the majority of the lesion, which was pale red in color and bounded by a narrow red halo. Pus, however, did not well up on pressure. Along the ulnar border of the hand, a number of separate discrete lesions the size of a pea were found. They were unquestionably of recent origin and they showed to a marked degree the warty and other characteristics given by Riehl and Paltauf, with the exception that there was an absence of pus. The plaques on the dorsum of the hand, which had become confluent, occupied a considerable space. They now formed a diffuse patch, which beginning about a half inch above the knuckles, extended to the upper border of the carpus, while laterally it reached the ulnar border of the hand, on one side, and on the other was bounded by the metacarpal bone of the index finger. This large plaque was more or less surrounded by a narrow red halo, and its surface was papillomatous and even decidedly fungoid in places. Ulceration was nowhere to be

<sup>8</sup> Riehl and Paltauf. *Viertschft. f. Dermat. u. Syph.*, 1886.

seen, but lateral pressure caused pus to well up from the base in many points. There were also numerous small crusts, but any great excess of horny epidermis was not noticed.

On the right hand there was found, on the first phalanx of the index finger, a large oval lesion, but the one on the knuckle of the little finger had disappeared, leaving a superficial cicatrix. A large diffuse plaque occupied the dorsum of the hand from about midway upwards to the wrist, around the ulnar side of which a number of small discrete lesions curved, forming a more or less serpiginous line. On the wrist a glistening white superficial cicatrix was seen, the site of the primary plaque, which had undergone complete involution. The general features of the lesions and plaques on the right hand were the same as were observed on the left. Here and there in the large diffuse patches on the backs of both hands there were found portions undergoing, or which had undergone involution. On these the papillomatous or warty character had disappeared to be replaced by cicatricial tissue. Nowhere on the red halo surrounding the patches were there any small pustules.

The patient stated that the lesions were at times inflamed and were then quite painful, but for the most part subjective sensations were absent, except a slight itching occasionally. It was, unfortunately, impossible to obtain one of the small primary lesions for microscopical examination, the woman objecting to any one of them being excised, therefore I was obliged to be contented with a small piece from the edge of the large patch on the left hand. This was hardened in absolute alcohol, mounted in celloidin and cut with the microtome. A portion of the sections were stained with borax-carmin, the remainder for tubercle bacilli. In the carmin sections granulation tissue, small tubercles, epithelioid cells, giant-cells, etc., such as characterize tuberculosis, were found. The general features did not correspond exactly to those detailed by Riehl and Paltauf, differing in the much greater prominence of the papillomatous growth, in the lesser amount of horny accumulation covering it, and in the diffuse infiltration of the tissue with small round cells. These differences can, however, be explained by the facts that the sections examined were not obtained from a young lesion, but from a patch which had been present for a long time, had been subjected to all kinds of treatment since its first appearance, and had been repeatedly inflamed. Consequently the want of exact correspondence did not invalidate the diagnosis of tuberculosis, one which was further proved by the examination of the sections stained for bacilli. In these tubercle bacilli were found, not, however, very abundantly, only one or two in each section. They were found lying high up in the papillæ and also in the upper portion of the cutis proper, but none in the rete. The

presence of these bacilli thus established the nature of this patient's disease without question, although the diagnosis of tuberculosis cutis was not an impossible one when proper weight to the clinical history and symptoms was given and other cutaneous affections which might have resembled it were excluded. It would seem as though the source from which the disease was acquired was also clear. She attended to her son who had phthisis, washing the linen and utensils which had been used by him, and a perfectly just supposition is, that she was inoculated by tuberculous sputa, or matter containing tubercle bacilli. In women of her class there is not found that attention to the hands, either in regard to cleansing or avoidance of small cuts or scratches which might be desired, and the probability is that some of these latter furnished the point of ingress to the microorganisms.

The primary lesions, that is, the small discrete ones along the ulnar border of the left hand and elsewhere, agreed clinically in every way with the description given by Riehl and Paltauf, with the exception that there was absence of the miliary abscesses mentioned by them. They are not, however, of great consequence, being only the result of secondary infection, and at any rate they were present in the older plaques. The very marked papillomatous character of these latter situated on the dorsum of both hands, cannot be said to belong to the process directly, but its development should be ascribed to the repeated inflammatory attacks to which these patches were subjected.

At the beginning of this paper it will have been noticed that the statement was made, that the so-called anatomical tubercle was very closely allied to the tuberculosis cutis verrucosa of Riehl and Paltauf. There do not, in fact, seem to be any material reasons why a distinction should be made between them. They certainly agree in their causation, while in the life history, the symptoms characterizing the lesions and the anatomical changes found in each, there is a virtual agreement. The only difference between them seems to be in the source of the material causing them, but that is such a minor point that it would, unquestionably be better, and it would simplify nomenclature, if they were both included under the same name as representatives of inoculation tuberculosis of the skin; which, in fact, has lately been done by Finger.

The diagnosis of this inoculation tuberculosis may at times be difficult. Still if full value be given to the general history of the patient, the course of the individual lesions, and aid be obtained also from the microscope and from differential diagnosis, the obscurity which might surround a case may be easily cleared up.

Owing to its verrucous character, the disease certainly resembles several other cutaneous affec-

tions, among which may be mentioned lupus papillaris, which very frequently is found on the extremities and hands. This form of tubercular disease—that is, lupus—begins most frequently early in life and its primary lesions are small brownish tubercles deposited in the skin. After these small nodules have undergone degeneration, broken down, and an ulcer has formed, then from this as a base the papillary proliferation shoots up and the verrucous form of lupus is established. As has been mentioned, no ulceration ever occurs in the inoculation tuberculosis under consideration, the primary lesion arising from normal unbroken skin. Relapses likewise never take place in the cicatrices, as is the case in lupus.

The ordinary inflammatory papillomata are likewise easy of recognition from their localization, their acute course, the absence of cicatricial involution occurring spontaneously, and by the history and symptoms of the disease which preceded their development. The so-called frambœsia syphilitica differs also from the tuberculosis verrucosa cutis in that it always develops from an ulcer, which has the peculiar indurated base of specific lesions. It is surrounded by a sharply defined zone of infiltration, and either in the vicinity are some characteristic ulcerations, or here and there on the body there may be found evidences of previous or existing syphilis.

On the backs of the hands, the papillary form of epithelioma is not infrequently met with. It originates, however, from a preexisting wart or from an ulcer; its base is indurated and it undergoes ulcerative metamorphosis, all of which are absent in the form of tuberculosis under consideration.

It is scarcely necessary to continue further the question of differential diagnosis, since in any doubtful case recourse should be had to the microscope, which will readily solve the question; but a few words in regard to treatment are advisable.

All that there is to be said of this is comprised under the term mechanical. The small plaques should be excised in toto, while the larger ones may be scraped out with Volkman's sharp spoon or destroyed by means of a Paquelin cautery. Thorough and complete destruction of the disease is the important point, and the choice of remedies should always be made with a view to that end.

No. 45 E. 30th Street.

SCARLET FEVER prevails to such an extent in Holland, Mich., that the Board of Health has ordered the Sunday-schools to be discontinued.—*Chicago Evening Journal*

THE membership of the Association must be increased for the general welfare.

## A CASE OF ATROPHY OF THE SUPERCILIA AND CILIA, ASSOCIATED WITH ATROPHY OF ALL THE FINGER-NAILS, OF CONGENITAL ORIGIN.

*Read in the Section on Ophthalmology, at the Thirty-ninth Annual Meeting of the American Medical Association, May 9, 1888.*

BY R. TILLEY, M.D.,  
OF CHICAGO, ILL.

G. H., æt. 17, father and mother living, several other children. Patient came complaining of difficulty in using her eyes. There was a large amount of photophobia, considerable blepharitis and some conjunctivitis, the two eyes being about equally affected. There was no entropion, but the upper lids were considerably swollen and there were practically no cilia on the lower lids, about three or four, stunted in growth on each under lid. On the upper lids the cilia were more abundant, but still there were few in number and stunted in growth. The supercilia presented, however, the most striking features. They were so short and stubby on both sides, especially towards the temporal region, that I could not be persuaded that she had not burned them either intentionally or accidentally. Whilst I was examining her, the Sister Superior of the institution came in the room and at once observing the supercilia exclaimed, "What made you burn your eyebrows?" To which the girl protested smiling, that she had not done so; that they had always been in that condition.

The hair of the scalp was abundant and black. On examining the finger nails I found a marked condition or what might be called dystrophy of all the nails of both hands. There was not one exception. She assured me that her father's nails are exactly the same as hers, on both hands, and that his eyebrows are similar to hers. I have not had an opportunity of seeing her father to verify her statement in this regard; on further inquiry she told me that she had two brothers similarly affected. I visited her home and found a little brother about two years old. All his nails were as nearly like the nails of my patient as it was possible for the nails of a child of two years to be like one of seventeen years. The cilia and supercilia were also exactly similar to those of his sister. On the lower lid there were three or four cilia, and those stunted in growth, and the supercilia had the same burnt-off appearance, only the phenomenon was not so striking as the little one had light hair and light supercilia, whilst my patient had dark hair and dark supercilia.

I have examined the cilia and supercilia under the microscope and have brought a slide with me so that those who wish to examine them may have the opportunity. There is a marked deficiency in the epithelium of the hair both in the shaft and the root. Both show a marked dystrophic condition. It would seem as though the

burnt-off appearance was occasioned by the breaking of the shaft. One of the supercilia on the slide shows a place where it was ready to break before it was taken out. The pigment present is abundant. The great majority of the individual hairs was not more than an eighth of an inch long—root and all.

The nails, as I have said, on every finger of both hands, exhibited a phenomenon which I have tried to demonstrate to you by a cast. It was taken from the thumb. All the other fingers correspond to the thumb so closely that I did not think it necessary to take another cast. It would simply have been a repetition as nearly as a finger can resemble a thumb.

The nails are not discolored in any way; they have not lost their luster, but they are so thin that they give practically no support to the tip of the finger, and each nail on its anterior half, presents one, two or three little depressions, according to the size of the nail. There is not among the whole fingers a single nail that exhibits any projection at the free border. The nails on the toes are similar, only they are more distorted and are little shapeless masses of distorted epithelia. The little brother's toe nails were not quite as much deformed as those of my patients. He was running around without shoes or stockings on.

The mother sustained the testimony of my patient that her father's nails, eyelashes and eyebrows were exactly similar in appearance to those of my patient, and considering that I have seen the same manifestations according to her statement in the little brother, I think, without unwise credence, we may accept the other cases of father and older brother on testimony. We have then for consideration a father and three children all exhibiting marked similar peculiarities in the nails, cilia and supercilia.

What shall I say relative to the etiology of this peculiarity? Kaposi and other writers on dermatology say that when the nails are disfigured by atrophy or dystrophy the hair frequently exhibits similar conditions. I find no special mention made of the cilia and supercilia.

Evidently in their estimation syphilis is responsible for a large share of the deformity which occurs in the nails, and to me the peculiarity of the fingers in question are more satisfactorily explained by a supposition of a syphilitic inheritance. But if that is the case in the nails has the same cause been at work in the distortion of the cilia and supercilia? I carefully sought, but was unable to find, any enlarged glands; there were no characteristic teeth, no deformity of the bones, nor any indefinite cachexia. The only suspicious circumstance that showed itself the last time I saw the patient was an abscess on the arm which, supposing there had been a history of syphilis either congenital or acquired, might well have passed for one of its products. But of course acquired syphilis is ruled out.

I will merely add, the acute affection for which the patient was brought to me rapidly subsided, but that I did not attempt any medication or treatment to restore the cilia or supercilia.

## A CONTRIBUTION TO THE STUDY OF TUMORS.

*Being part of the Discussion on Tumors at the recent meeting of the New York State Medical Association.*

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What constitutes malignancy histologically and clinically?

From earliest times tumors were grouped into two classes, the benign and malignant. Long before exact methods of observation permitted closer discrimination, the physician recognized these two groups. From the patient's standpoint, the most important question is whether the tumor is or is not innocent in character. To the surgeon, too, this division of neoplasmata, based as it were upon prognostic considerations is all important. It establishes the time for and the character of any operative interference. It continues the patient under observation for a period of years, or leads to his dismissal after operation. And, therefore, it is proper, though perhaps very unscientific, to view tumors in this light.

What is understood by the malignancy of a neoplasm? If we are to consider it synonymous with danger to life, tumors in themselves innocent, would by location become malignant. This is obviously not what is meant. It refers to a growth which invades, not merely displaces tissues in its immediate neighborhood, which excites in them such radical changes that their former identity is lost; a growth of infectious character, which disseminates its infection through vascular and lymphatic channels, heaping up its infectious elements in the glands and organs of the body. The malignancy of a tumor excludes its being serious simply because of its local disturbances, but ranks it as one capable of producing not only local destruction of tissue but of extending its destructive tendencies to various organs and thus imperilling life. Not all malignant tumors possess this power to an equal extent, nor do all tumors, histologically identical, exhibit the same degree of malignancy. Moreover, in others the border line between benignity and malignancy cannot be well drawn. The manner of growth of malignant neoplasmata is extremely suggestive of their germ origin. In these days of bacteriological investigation, it is not remarkable that much attention has been devoted to the search for some microbe, the presence of which might definitely establish the malignant character of a tumor.

In November of last year, at a special meeting of the Society for Internal Medicine of Berlin, Dr. Scheuerlen, clinical assistant of Professor Leyden, presented a paper upon the "Etiology of Cancer." It was based upon a study of ten cases of carcinoma of the mamma, five of the uterus, five of the cervix, three cases of metastatic cancer of the liver, and one of the stomach. He asserted that cultures made from spores found in each of these tumors, lead to the development, each time of the same bacillus.

Franke reports in *Muenchener Medizinische Wochenschrift*, No. 4 of the current year, that he has discovered in sarcoma, bacilli and spores which are constant. The bacilli are thinner and longer, the spores somewhat thicker and larger than those of the carcinoma. Schill, of Dresden, who since 1882 has searched for a micro-organism to which he could attribute the origin of cancer, claims that he constantly found in cancer juice and sections of carcinomatous tissue rod formations, but never really bacilli. Petit (*L'Union Medicale*, No. 152, of last year) claims for Rappin the glory of having been the first to discover the Scheuerlen bacillus, with which he has awakened, by inoculation, a cancerous disease in a rabbit, finding here, again, the same microbe.

And yet good observers who have studied the validity of these claims, among them Senger in particular, insists that Scheuerlen has mistaken for the spore of cancer what is nothing more than that of a potato bacillus. Senger maintains that if it is really the bacillus of cancer, it ought to be evident in cancerous tissues as a bacillus. But here only spores have been found, while the bacillary growth is most luxuriant where the potato is used as soil. Moreover, in upwards of 350 inoculations, the results have been negative. So while the theory of infection through the agency of a microbe might very beautifully explain the progress of malignant tumors, we can merely say that we have reached a new stage in this study, but are not as yet able to demonstrate microscopically any pathognomonic germ.

And yet the microscope has been the means of unfolding to us an explanation of these malignant attributes. In most instances it is possible to determine histologically, the character of a tumor. Luecke, excluding cysts, recognizes in solid tumors, the only real neoplasms. For the present discussion, this broad division will answer our purpose. But it must not be forgotten that many apparently innocent blood cysts are really hæmorrhagic sarcomata, their walls presenting the characteristic microscopic appearances. Speaking generally, it may be said that those solid tumors which exhibit microscopically, maturely organized tissue formation, are innocent, while those whose counterpart cannot be found in the mature body, but which present a rich but immatured cell structure, are malignant

growths. Sarcoma and carcinoma exhibit no typical matured tissue in their construction. Sarcoma is a connective tissue tumor, with its component cells in their embryonic state. For many years one form of cancer bore the name of epithelioma, as it was apparently of epithelial lineage.

In 1871 Waldeyer, in an able résumé of his own as well as the labors of other German co-workers, published in Volkmann's *Sammlung* an address, which took the advanced stand that all forms of cancerous disease were of epithelial origin. In studying the development of these two forms of malignant disease, it becomes apparent that they do not imitate in their growth the typical connective and epithelial tissues, but that sarcoma becomes the atypical unrestricted connective tissue tumor, and carcinoma the atypical unrestricted epithelial tumor. More than this the kind of epithelium present at the site from which the tumor grows, indicates the kind of carcinoma we are to encounter. Squamous, spheroidal and cylindrical epithelia develop in turn, not only primary carcinomata of their distinctive types but maintain their individuality, even in secondary formations. The same independence for round and spindle cells is claimed by Ackerman, in his very learned discourse upon the histogenesis of sarcoma. These two kinds of malignant tumors maintain their respective types throughout the whole life period of their growth. There is no conversion of cells of one tissue to those of another, no growth of primary cancer from connective tissue. This statement is not to be understood as opposing, but rather of explaining the conversion of mature epithelial or connective tissue tumors into the malignant ones of their kind. The bloodvessels form the center of growth of the sarcoma. About them the spindle cells are seen to form and indeed are seen to grow out of their adventitia. The bloodvessels increase in number and size and soon countless nucleated spindle cells, sometimes large and again small, are seen isolated or gathered into bundles. If the formation has been rapid, no time for fibrillation occurs, and we have a tumor which may attain great size, rich in vessels and of soft consistence. Here the vessels may be seen converted into or built up of spindle shaped sarcoma cells, and the blood current may course through a series of sarcomatous canals. With slower growth we recognize macroscopically a distinct fibrillar arrangement, and the tumor microscopically is seen to possess a firmer structure. The particular arrangement of this new connective tissue will vary with the location of the growth, not only because of the peculiarities imparted to it by location, but also of the rapidity of growth its situation may excite. As the tumor grows by addition to its surface, the parts nearest its circumference, present the most recent tissue formations.

We have another variety of connective tissue

tumor, the very counterpart of new granulation tissue, the round celled sarcoma. Here we find in addition to the connective tissue stroma just mentioned, a large number of round cells, some corresponding to leucocytes in appearance and action, others, like mucous corpuscles or certain glandular cells. They are densely crowded between the meshes of the stroma. We encounter round cells of varying size called small and large and which Ackermann, because of their capability of taking on different stains, believes to be different kinds of connective tissue cells.

The stroma of sarcoma may assume most atypical and polymorphous shapes. It may not only be spindle shaped and fibrillar, but may be stellate, pyramidal and extremely irregular, or may at times resemble strongly the spacing met in carcinoma, when it is termed alveolar sarcoma. It is thought by Ziegler that the conversion of a network of vessels into a sarcomatous tissue leads to this alveolar formation. Scattered amongst the spindle and polymorphous stroma we sometimes find large multinuclear cells, known as giant cells. They are particularly encountered like their counterpart in the embryo, in bony structures.

Embryonic connective tissue is rich in mucin. This is particularly true of that which is ultimately to be converted into adipose tissue. We find the counterpart of this formation in the tumor called myxoma. Its usual seat is as we would anticipate, in parts where fat abounds normally. The close resemblance to, and frequent association of this tumor with the sarcoma renders it not altogether improbable that with time they may be grouped together. Stellate and fusiform cells are found as in sarcoma, and the difference between the two tumors is rather more chemical and physiological than histological.

It is not my intention to enter into a consideration of all the various forms of sarcoma due to location. They possess no important peculiarities save those imparted them because of their origin from specific matured connective tissues. Mention, however, should be made of the pigmented variety known as melano-sarcoma, with whose very malignant tendencies we are all acquainted. In its cells as well as its intercellular substance we find abnormally developed the normal pigment of the part. It is the cell element of the growth which indicates the character of the sarcoma, and it may be said that sarcoma asserts its greatest malignity when its cells approach most nearly the type of the youngest embryological connective tissue. And so the small round celled sarcoma is most greatly dreaded, next those spindle celled forms, where there is no marked fibrillation, while those which approach the higher and more organized types of tissue, exhibit less malignant tendencies. This disposition to attain in certain parts of a tumor the type of mature

connective tissue is frequently manifested by its organization into bone, cartilage and so on. For this reason it is essential that all parts of a tumor and especially its youngest parts be subjected to histological study, in determining its malignancy. The outlines of some sarcomata can be well drawn; it is particularly the small spindle celled variety which appears to the naked eye to be encapsuled. Guided only by the microscopic appearances, the surgeon would be apt, because of this thorough definition to pronounce the growth innocent in character, but the microscope shows that the cells utterly disregard such lines of limitation and reach well into the surrounding structures.

Quite as certainly as sarcoma is the embryonic connective tissue tumor is carcinoma of epithelial origin. The time has come when we can regard cancer as being of local origin. Primary cancers occur only where in the mature body, some form of epithelium exists. To appreciate the character of a cancerous tumor is to study the manner of its growth. When epithelial cells multiply upon the surface of a given part, and become organized into tumor formation, the growth remains innocent in character. The moment these epithelial cells begin to invade the underlying tissues malignancy has begun. Pursuing their course with the microscope, they are seen to enter the connective tissue traveling along any microscopic channel, lymph canal or bloodvessel, and soon collect at various points in little groups called cancer bodies, building for themselves nests in the connective tissue called alveoli. Virchow considered this alveolar arrangement of the connective tissue the essential histological characteristic of cancer and presumed that cancer bodies which filled the alveoli were the outgrowth of connective tissue cells. His views had been generally accepted until Thiersch, Waldeyer, Luecke and others proved that they were but a result of epithelial cell invasion. Chains of epithelial cells can in some specimens be seen tunneling through connective tissue and effecting in it decidedly radical changes. The entrance of epithelial cells into connective tissue territory, awakens the infiltration of this tissue with numerous round cells, resembling leucocytes in appearance. These young connective tissue cells, also decidedly impress the infiltrated tissue and lead to further structural changes. The relation of vessels and cells to each other, is not as intimate as that seen in the sarcoma, for here they do not run between the cells but in the alveolar structure. Epithelia are of low vital power. In normal tissues they receive their nutrition not by direct vascular supply but by absorption; so here in epithelial tumors we find them thriving in the same way, and like low forms of animal life, multiply most rapidly.

The cells partake of the character of the epithelium of the affected part. Where the tumor is



of glandular origin, as in the breast, they are spheroidal; where normally pavement epithelium is found, as upon the skin and most mucous membranes, they are of the squamous variety; and where we would be apt to encounter columnar epithelium, they are cylindrical. They resemble the various forms of epithelium in shape and nucleation; they multiply in the same manner, but in their distribution and arrangement they disregard all laws of normal growth and go as they please. This atypical arrangement is an essential feature of malignity. The cells are absolutely unrestricted in their movements and infiltrate all kinds of tissue. The more numerous the cells and the less abundant the connective tissue, the more malignant is the growth.

The character of the stroma depends upon the tissue invaded. As it is present in large or small amount the tumor is hard or soft. The alveoli do not always appear as separate cavities, but in the best specimens Waldeyer compares them to the openings in and channels through a sponge; and as by compression the sponge can be freed of water, so also can the alveoli be emptied. The cells may be so numerous as to render the existence of alveoli not apparent; but the characteristic epithelial cell is never absent.

In considering tumors only from the standpoint of malignancy, the resemblance of sarcoma and carcinoma may not be a matter of moment. However, it will be in place to say that while in every form of cancer we have connective tissue invasion and change it is only the alveolar forms which particularly resemble each other. In carcinoma, however, the cancer cells and the alveoli are distinctly separate; in the sarcoma we see nests of cells sending out branches communicating with each other and with the alveolar walls, demonstrating by this connection their homogenesis.

Contrasted with benign tumors like adenoma, fibroma, myoma and other forms of organized cell growth, we recognize as the characteristic histological evidence of malignity the presence in great abundance of immature cellular elements, arranged in most atypical forms. Whether a microbe yet undiscovered awakens, through chemical or other agencies this cell activity, and disarranges the equilibrium of normal tissue growth is still unknown.

In the clinical study of a tumor, we are concerned first with its history. Sarcoma, occurring when connective tissue growth is most active, is recognized as the malignant tumor of childhood and early life. When the vitality of connective tissue is reduced, the resistance to the invasion of epithelial tumors is lessened. For this reason carcinomata are encountered later in life. Growing from fixed tissues, each form of primary malignant disease is found in certain structures and even in definite locations. Primary malignant disease of bone, is sure to be sarcoma-

tous; carcinoma of bone results either from direct invasion from diseased epithelial structure or from secondary infection. Therefore, should we find no external evidence of invasion, the search for a more remote source of infection must be continued. We encounter malignant tumors at points where two kinds of epithelia meet, at constricted parts of canals and in places particularly prone to irritation. All of these facts correspond with the theory of development, made evident by histological study. Everything speaks for the local origin of malignant tumors. Were they of constitutional origin we should expect them to crop out simultaneously from different parts of the body. On the contrary, tumors which are primarily multiple are innocent.

Heredity is no longer to be considered an important factor. Congenital tumors are not malignant. Sebaceous cysts and nasal polypi follow up certain families more frequently than does cancer. Osteomata appearing in various members of one family are more sure to be located alike, than are malignant tumors.

Among the earliest local manifestations of a malignant neoplasm are those due to the infection of the surrounding parts. The resulting infiltration is characterized by an agglutination of the tissues, the mucous surfaces, for example cannot be freely moved upon the submucous tissues. There occurs fixation of the growth and restricted mobility of it. A malignant tumor of the breast, because of the penetrating infiltration, becomes adherent to the underlying muscular structures. It is the relation the tumor bears to its surrounding tissues which particularly exhibits its malignancy, clinically. The innocent tumor simply occupies a place in the tissues; it may, as a result of an inflammatory process, become somewhat adherent to the parts around it; it may, by pressure, produce atrophy of the muscles or absorption of bone. It acts only as a foreign body and possesses no power of infiltrating the tissues, in the midst of which it is placed.

Malignancy is further evident in the infection of neighboring lymphatic glands. While this tendency is largely possessed by the carcinomata, it is also manifested by some sarcomata. In a case, reported last year by Fischer, of malignant sarcoma of the penis (*Zeitschrift für Chirurgie*, page 313), the inguinal glands on each side were converted into sarcomatous tissue. With sarcoma of the testes, frequently pelvic lymphatic glands show sarcomatous degeneration. Whether sarcoma cells, because of their size and shape manage to pass through the lymphatics unarrested, or whether the lymphatics are not always invaded by the sarcoma cells, is yet a mooted question. But as in its origin sarcoma is so closely related to the vascular system, its dissemination is, as we would naturally expect, through the blood current, and with it we have earlier, than in carcin-

oma, the indications of more remote infection. Yet it is not always that only neighboring glands are involved. Virchow was the first to tell us that with gastric cancer the lymphatic glands above the left clavicle were frequently affected, and Belin has shown that every form of visceral cancer can exhibit glandular disease at some remote point.

In both sarcoma and carcinoma we have sooner or later organic infection, the result of the deposition of malignant emboli, carried through the blood current. These find their way to the lungs, liver, bones and other parts, and thus we have aroused a series of secondary malignant growths, whose presence we establish clinically.

In form malignant tumors present nothing characteristic. They adapt themselves to the shape of the affected part, sarcoma seeming often to be only an hypertrophy. Ordinarily they exhibit a broad infiltrated base; yet pedunculated growths may be sarcomatous in character. The vessels of sarcoma occasionally dilate to such an extent that the tumor appears like an innocent cavernous growth. One of this kind, I removed three years ago from a lady's arm. Histological examination showed it to be a melanotic sarcoma. It has as yet not recurred. With carcinoma we frequently find upon the surface isolated nodules, early adhering to the skin. They break down and the ulcer resulting is surrounded with discolored infiltrated tissues.

In the examination of malignant tumors, Luecke calls attention to the fact that not all transparent tumors contain fluid. Sarcomata and myxomata are often quite diaphanous. This property is shared by some lipomata and lymphomata. To the touch malignant tumors exhibit a varying consistence. Some are extremely soft, others very firm. Many primary carcinomata exhibit an elastic hardness, while the soft sarcomata, myxomata and softened carcinomata present elastic softness. This elasticity is often mistaken for fluctuation. The exploring needle or hypodermic syringe soon clears up the deception. Pulsation is apparent sometimes in sarcomata of bone or even of soft tissues. As the latter are built up largely of a sponge-like structure and can be greatly reduced in size by compression, the pulsation may strongly suggest aneurism. But their location, origin and growth will usually render a diagnosis easy. When bone is the seat of a pulsating tumor, it may be considered malignant, as the medullary canal can not well be the site of a spontaneous aneurism.

Sarcomatous disease of long bones may so undermine their stability as to render them very fragile before tumor formation has sufficiently developed to attract the attention of the patient. In December of last year a young woman was brought to St. Joseph's Hospital in Syracuse. During the preceding August she had fallen out

of a hammock, and in the following September she made a slight misstep and sustained a simple fracture of the thigh. At the time of accident no existing disease of the femur was suspected. Union did not take place; the rapidly increasing swelling of the thigh was supposed to be inflammatory, and was treated by fomentations. Upon her admission to the hospital the diagnosis of sarcoma was made. The disease made rapid progress; the tumor extended to the body. Secondary growths occurred in the lungs and upon the skin, and in March she finally succumbed after a most painful illness.

Another feature of malignant tumors is their recurrence after operation. In itself this is not indicative of malignity, for incompletely removed fatty and fibrous tumors will also recur. And yet the recurrence of sarcoma in the stump of the amputation, the recurrence of carcinoma in the cicatrix or neighboring lymphatic glands are to say the least very suggestive. The period of time elapsing after removal indicates whether the recurrence is due to the continuous growth of unremoved portions, or whether we are really dealing with a new tumor; while the parts affected by the new growth establish whether or not there was co-existing disease of glands or internal organs.

Tumors innocent in character and springing from specific tissues may be converted into malignant growths of their type. Thus the papilloma may become the squamous celled carcinoma. During the past year, the whole civilized world, and particularly the medical profession, were exercised over the malignant laryngeal disease of the late German Emperor. Stoerk published in the *Wiener Medizinische Wochenschrift*, Dec. 3, 1887, a most interesting paper bearing upon the diagnosis of papilloma and carcinoma of the larynx. As it nicely illustrates some of the distinguishing features of malignant tumors, I will ask you to bear with me while I present the results of his study.

In the larynx every affection of the epithelial surface, active or sluggish, leads to excessive epithelial growth, but none to such an extent as the papilloma. Aside from slight disturbances of phonation and laryngeal irritation, patients endure these papillary growths for an unlimited period without much inconvenience. A great quantity of catarrhal discharge is excited and the tumor is maintained in a succulent condition. Isolated papillomata may slough and be cast off, others undergo retrogressive changes. While innocent in character they are freely movable, produce no interference with the action of the laryngeal muscles, and maintain a pale yellowish-white color.

The moment the discharge lessens and the papilloma ceases to be succulent, the floor upon which it rests changes; single masses become conglomerate, nodules appear upon the surface, the tumor



is less movable, it becomes of firmer consistence and takes on a darker hue. This dark discoloration is a positive indication of its change in character. Ultimately the tumor is found to be immovable, as though it were riveted to the substratum. With the cessation of epithelial growth upwards it attains greater breadth at its base. The epithelial cells are found to have penetrated connective tissue, muscular fibres, and the very walls of the blood-vessels are crowded with epithelial cells. This general infiltration produces great interference with laryngeal functions; cellular infiltration progresses, new nodules appear and the carcinoma spreads. Disseminated papillomata exhibit least the tendency to carcinomatous conversion.

The microscopic examination of papillary masses coughed up or removed will not reveal the true character of the growth, for it is the examination of the base which is all-important. Endolaryngeal operations performed for this or other purposes have often rendered these growths unsuitable for extirpation. The mildest operative procedures often awaken cell activity and confer upon quiescent growths most malignant attributes. Painful deglutition, disturbed phonation, respiratory distress, take the place of a mild train of symptoms. The loss of muscular integrity, the resulting laryngeal immobility, are pathognomonic of the conversion of innocent into malignant tissue.

For these reasons, Stoerk believes that the diagnosis must be made with the laryngoscope, and that here, at least, clinical appearances are more to be depended upon than histological investigation.

*What is the mechanism of the necrotic process which so often occurs in certain neoplasmata?* Innocent tumors are not prone to necrotic changes except as a result of interference with their nutrition, or as overaction in them develops inflammatory disturbance. By pressure they may occasion death in the surrounding tissues or, resulting from their excessive growth, overlying tissues may become too tense and give way.

In malignant tumors, the outcome of atypical cell growth, there may occur cell metamorphoses and death. These tumors may additionally be subjected to accidents and diseases. Hæmorrhage into a sarcoma may be so extreme as to completely alter its character. Moreover, inflammation may arise and result in structural death.

It is in the carcinomata especially that we encounter the necrotic processes. As epithelial tumors depend for their nutrition upon the vessels of the connective tissue, the relation of the epithelial formation to the underlying structures is of vital importance. When, as a result of epithelial disturbance, the underlying connective tissue becomes densely packed with small granulation cells, thickening and development of the epithelial body is prevented and, cut off from its

nutrient subsoil, cancerous ulceration occurs, which we call rodent ulcer.

When superficial structures become infiltrated with carcinomatous cells, and by tunneling through and into them, the nutrition of the part ultimately becomes affected, necrosis occurs. The resulting ulcer is not simply the result of tension and pressure, but actual cell infiltration, and its edges bear unmistakable evidence of it. The ulcer and tumor are so intimately associated, that the former simply fades into the latter. In the same way, epithelial cell invasion of the deeper parts cuts them off from their vascular supply. Central softening and degeneration results. The destructive process extending to the surface, leads to the formation of crater-shaped pockets. In the extension of carcinoma from skin to mucous membrane, the disease does not spread continuously, but the epithelial invasion reaches from the depth up towards the mucous surface and chokes the normal tissues into ulceration.

The protoplasm of the epithelial cells may undergo change. Fatty degeneration and caseation occur, particularly in the spheroidal, sometimes also in the squamous-celled carcinomata. This fatty metamorphosis may continue to such an extent as to fill some of the alveoli in carcinomatous breasts with a butyrine substance. Small losses of tissue thus result. The connective tissue cells also undergo similar degeneration. Extensive suppuration and sloughing may follow, and in this way, too, deep pockets and great loss of tissue is occasioned.

A form of degeneration, once supposed to be a variety of carcinomatous growth and not decay, is colloid degeneration. It is seen particularly in the carcinomata arising from columnar epithelium in the intestinal tract and the cervix uteri. Other varieties occasionally exhibit it. Its character varies with the parts involved. Unquestionably, however, it is the result of alteration in the protoplasm of the cancer cells.

Closely allied to this is the mucoid degeneration of the connective tissue cells. We have present in all connective tissue, as Kuehne showed, a certain amount of mucin. It is the muciparous serum which separates the sarcomatous connective tissue cells from each other. We encounter mucous transformation in sarcoma of the breast, testes and other parts. It leads to necrotic changes and cyst formation in some cases.

Inflammation, rarely terminating in suppuration, occurs in sarcoma. It may lead to cell activity and an abscess may be suspected. But skin infiltration gives way to skin destruction, and a fungous mass appears. Butlin reports a case where a sarcoma in this manner sloughed out of a boy's thigh.

In the stroma of old cancers, especially of the breast, a form of metamorphosis occurs by which the growth is said to wither. The process is

rather one of organization, a real fibrillation of the connective tissue. By means of this cicatricial contraction the growth is greatly reduced in size.

It is evident that, as cell activity manifests itself in the growth of malignant tumors, so we see cell life intimately associated with their decay and death.

*Are malignant neoplasms ever cured?* If, in referring to malignant growths, we speak of effecting a cure, and mean thereby the internal administration of medicines which will aid a given part to resist the further invasion of the disease and to cast off the existing trouble, returning to its normal state, we surely must answer the question in the negative. No one speaks longer of malignant neoplasms being the local expression of a constitutional taint. The disease begins in the very primitive cells of a part, and in its advance simulates most closely other infectious diseases of local origin. The question is, therefore, to be put in this manner: Can we ever so thoroughly eradicate a malignant tumor that in the future there shall be no recurrence of it locally, nor any remote manifestations attributable to its infection? This we certainly can answer affirmatively.

To say whether, in a given case, a favorable prognosis can be offered, requires a consideration of its period of existence, its seat, its anatomical and clinical characteristics, its extent, the local and constitutional complications, as well as the operative measures to be pursued. As the discussion of these important questions will fall to abler hands, it will only be necessary for me to briefly state a few established principles.

The greatest hope for the relief of malignant disease lies in its early thorough removal, while the disease is still very limited in extent, and before glandular infection is evident. As many cases have passed far beyond this stage before surgical attendance is solicited, the ultimate result is greatly imperiled. The primary location of a malignant tumor in an internal organ, where signs and symptoms of its existence are most obscure, or whenever its character cannot be well defined, as in the thyroid gland, early operation is out of the question.

A tumor which in a brief period of time has attained great size and exhibited unusually malignant tendencies, does not present as favorable an outlook for future exemption as does one whose growth has covered a long period, and where indications of local and general infection have long remained absent.

The occurrence of a primary growth in a part thoroughly accessible, and whose site forces its early recognition by the patient, leads to the most favorable results. Thus, in the lower lip 30 to 50 per cent. of the afflicted are cured. Appearing where with difficulty it can be entirely removed, its thorough eradication is all but im-

possible. Malignant tumors of the upper jaw present, therefore, but little to encourage an operation. When, furthermore, the removal of a malignant neoplasm demands an operation in itself dangerous, the probability of success is small.

In his recent work upon "The Operative Surgery of Malignant Disease," Butlin strongly denounces the very serious but so-called brilliant operations of recent times for the relief of malignant disease. He refers to statistics of extirpation of the larynx, removal of malignant tumors of the kidney, of the uterus through the abdominal wall, cancerous thyroids, and so on, 364 cases in all, of whom 238 died in consequence of the operation. "Battles, shipwrecks and railroad accidents," says he, "are mild and merciful compared with some of these achievements of modern surgery." But it is not my intention to enter upon a discussion of operative procedures.

Without extending my remarks further, it can be safely said that where, by an operation, a malignant neoplasm which has not awakened secondary infection can be thoroughly removed, we may hope for permanent relief. True, people may after years again become the victims of malignant disease, just as they may twice have pneumonia; but the two attacks need not be more closely related to each other. Great loss of tissue or sacrifice of limbs may be necessary, but the disease is wholly removed.

#### A REPORT OF TWO CASES OF SCALDING OF THE AIR PASSAGES BY THE ACCIDENTAL INHALATION OF STEAM, WITH REMARKS.

*Read before the Medical Society of the District of Columbia, June 13, 1888.*

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IN THE CHICAGO POLYCLINIC, ETC.

The following case fell under my observation in the Marine Hospital Ward of the Providence Hospital:

Captain Wharton, of the steam tug Clara Uhler, was brought to the hospital at 7:30 P.M., December 14, 1883. It appeared on inquiry of the Pilot who accompanied him, that about 6 o'clock in the morning, the tug was lying in her berth at Shamrock Wharf, lower Potomac, and the Captain was asleep in his cabin, the engineer attempting to get under way, a pipe blew out and threw with great force the steam and hot water through the bulkhead on to the Captain and scalded him about the body, face and limbs, and he inhaled much of the steam. As the tug was disabled, the patient was compelled to wait four hours on board before he could proceed up the river. He arrived at Alexandria at 5 P.M. where a physician was sent for. He gave him a

white powder, presumably morphia, and sent the patient hurriedly on to the hospital. On examining him, I found him in a state of collapse, his extremities were cold and pulseless, and his temperature was sub-normal. He was conscious but unable to speak, and his respiration was shallow and difficult. The *facies hippocratica* was well marked. I looked into his fauces and found the pharynx a white mass of scalded mucous membrane looking like a lining of cotton. Every effort was made to bring about reaction by the usual remedies, but the unfortunate man died in about two hours after admission to the hospital.

*Case 2.—Inhalation of steam. Treatment by inhalation of dilute sulphuric ether; Recovery.*—A male child, Geddis Crump, æt. 20 months, was playing in the kitchen of the house 22 D Street, N. W., on the evening of November 23, 1887, and while so playing applied the spout of a tea-kettle to its mouth and suddenly inhaled a full inspiration of the steam from the kettle. The child immediately began struggling for air and rapidly grew worse. Dr. G. H. Wagner was sent for, and on his arrival found the child in great distress, stridulous breathing and cyanotic hue, struggling violently for air. The inside of the mouth and pharynx looked as if it were lined with cotton. Fearing œdema of the glottis, Dr. Wagner sent for me in consultation, and on my arrival an examination convinced me that the entire track of the lining of the pharynx, larynx, and trachea seemed involved. There was, therefore, no indication for the performance of tracheotomy as operation at the usual site could not relieve the diminished calibre of the air passages below. I, therefore, recommended the inhalation of ether for the double purpose of relieving the pain and arresting the spasm, but as the ether must be continued for some hours a diluent was necessary, and I used listerine; it is probable that an alcoholic solution of oil of juniper and cajuput might have answered an equally useful purpose, but the listerine was handy and no substitute occurred to me. Dr. Wagner administered the mixture, (ether 1 part, listerine 3 parts) and the pain was arrested, and the breathing became tranquil. He continued to use it through the night whenever the breathing became difficult, and had the satisfaction of seeing the child much better the next morning, and the inhalation was continued at intervals until about 4 P.M. Wednesday. At 9 P.M. on that day, the stridulous breathing again began, and the inhalations were continued until about midnight, after which there was no recurrence of the difficulty. During this time the child was nourished by means of weak milk punch. Steady improvement began, and by the following Monday the child was entirely well.

A hurried glance at the literature of the subject shows that these cases are not numerous, although Mr. Gant<sup>1</sup> speaks of scalds of the larynx

as frequent "among the children of the poor, in their attempting to drink from the spout of a kettle containing boiling water. The act of swallowing is not complete, but the inside of the mouth and pharynx are scalded, and œdema of the glottis is speedily induced; the interior of the larynx remaining unaffected."

A somewhat similar statement is made by Mr. Bryant,<sup>2</sup> who in writing of scalds of the larynx, says: "This somewhat common accident is doubtless engendered amongst the poor by the habit of feeding their children out of a teapot.<sup>3</sup> The child when thirsty and alone, being accustomed to drink from the spout, seeks it from the kettle, and so scalds the pharynx and orifice of the larynx, that œdematous inflammation of the part follows in the same way as a blister arises by the application of boiling water or steam to any other tissue. The symptoms caused by such an accident appear, as a rule, very speedily, the small chink of the glottis soon closes, and as a consequence, a fatal result ensues, unless early relief can be obtained. In some cases the mouth, with the soft palate, tongue, and fauces will be found swollen and vesicated. There will be difficulty in swallowing, and some alteration in the character of the voice. The respiration rapidly becomes affected, and a spasmodic croupy cough appears with stridulous breathing. These symptoms may be complicated with attacks of spasmodic dyspnoea, at long or short intervals; but when these attacks appear extreme danger is indicated, any spasm possibly proving fatal."

Mr. Eddowes<sup>4</sup> has reported a case of a severe scald of the mouth followed by œdema of the glottis. In this case tracheotomy was performed, but the child died on the fourth day after admission to the hospital. The post-mortem examination showed great venous congestion of the brain, and bubbles of air in the superficial veins of the membranes, some adhesions between the hemispheres, sero-purulent effusion between the dura arachnoid, and the lungs engorged with blood. The mucous surface of the trachea up to the larynx in a state of hyperæmia with appearance of purulent effusion. In the stomach there were two spots of sanguineous extravasation underneath mucous coat. The other organs were examined by Mr. Eddowes, but there is no note of any abnormality attributable to the injury.

A number of steamboat explosions have occurred in this country, in which scalded men have been admitted to the various Marine Hospitals, but it has only rarely happened that the mouth and larynx have been scalded in these accidents. It seems to depend upon the lo-

<sup>1</sup> Gant, Frederick James, (F.R.C.S.): The Science and Practice of Surgery, London, 1871.

<sup>2</sup> Bryant, Thomas (F.R.C.S.): The Practice of Surgery, London, 1872.

<sup>3</sup> This statement seems to have originated with Marshall Hall, vide Med. Chirurg. Trans., Vol. xii, London, 1822.

<sup>4</sup> London Lancet, 1879, Vol. ii, p. 122.

cation of the men's berths, and on a majority of vessels, the fore-castle is a safe distance from the boilers. Not so, however, on steam tugs and the smaller varieties of steam water-craft where economic reasons govern the location of the sleeping spaces.

In the harbor of Toulon, in 1859, a steam pipe burst on the corvette "Le Roland," and a number of seamen were badly scalded, and in these cases there were some scalds of the mouth.

The treatment consisted of opiates internally, and the usual topical remedies. At the necropsies it was found that the tongue was denuded, red and bloody, and the muscular structure visible. The interior of the mouth and arches eroded, swelling of mucous membranes of air passages, and general congestion of the viscera.<sup>5</sup>

A somewhat similar condition is seen in the inhalation of hot smoke. Dr. Cohen<sup>6</sup> relates a case he saw with Dr. Keen, where there had been an inhalation of hot smoke during the conflagration of a burning building. In this case there was "œdema of the larynx threatening suffocation, copious and frequent inhalations of the spray from a solution of the watery extract of opium relieved the suffering, and the patient eventually recovered."

In twenty-eight cases of scalds of the mouth, pharynx and glottis collected by Mr. Durham, twenty-three were fatal. (Ashurst.)<sup>7</sup>

It must be evident on reflection that the lesions from the inhalations of steam, are more extensive, reaching further into the air passages than hot water or other fluids, and the same remark is applicable to those cases where in a burning building a flame is inhaled. In the case of caustic liquids or hot water the epiglottis, by falling down, protects the larynx, but this is rarely the case in the inhalation of steam, noxious gases, or flame.

As a medico-legal point, it is well to remember that severe internal congestions and reflex inflammations may supervene upon the injuries as well as upon those more extensive surface denudations. In short, says Taylor,<sup>8</sup> besides congestion there is generally abundant serous effusion in one of the great cavities, especially in the head." Rokitansky<sup>9</sup> has specially observed after burns of the skin of the abdomen, that they "were in a few instances attended by fatal hæmorrhage from the bowels."

In the post-mortem examination of cases of burns of the mouth, we should remember that after death the œdema is less marked than during life, and allowance must be made for that fact in deciding on the immediate cause of death, for a degree of swelling which involved danger to life,

may, indeed, have almost entirely disappeared when the section is made.<sup>10</sup>

*Treatment.*—Let us now consider the important question of treatment in these cases. The indications are plain, to stop the pain and arrest the swelling. We cannot stop to assure ourselves that the burn is in one or another of the six degrees of Nèlaton,<sup>11</sup> and then after classification adopt the remedy appropriate to the degree. The swelling of the lining membrane may entirely occlude the upper air passages in a few hours. The remedy then to be useful must be speedy in its operation. Such a remedy we have in sulphuric ether. This, it will at once be seen, acts in the double capacity of a local and general anæsthetic.

The use of ether as a topical dressing of burns is not new. Dr. Nunn<sup>12</sup> refers to its use in recent burns on the surface of the body, superficial in character and limited in extent. He claimed that vesication was often prevented by commencing early, and steadily continuing its use until the pain ceased. Notwithstanding its irritating qualities, in case of the inability to procure ether, Dr. Nunn would use chloroform. The observation of Dr. Nunn in regard to burns on the surface of the body, is precisely in point, in the cases of scalds of the upper air passages, for the œdema follows the vesication, and if by the timely administration of the ether, vesication may be prevented, we have one of the most valuable therapeutic resources, and at the same time complete relief from the agonizing pain quite frequently the most prominent feature.

In my judgment, leeches to the outside of the throat, as recommended by certain text-books, will fail to exert any influence whatever in the arrest of œdema. Both Mr. Gant and Mr. Bryant speak of this means of treatment, but Mr. Gant, regards it as valueless, and in regard to tracheotomy he views it as "only an alternative between death and the possible preservation of life, and that the operation is generally fatal from the supervention of bronchitis or pneumonia."

Mr. Bryant, after referring to the mild cases which scarcely require treatment, speaks of a case of a child "in whom these symptoms were so slight that no anxiety was felt, but one spasm (laryngeal) took place two hours and a half after the accident which put an end to life." When the laryngeal spasms are present, Mr. Bryant early resorts to tracheotomy. In some cases of œdema after tracheotomy, he has found it advantageous to puncture the epiglottis, and the swollen laryngeal opening. An ordinary tenaculum he has found to answer every purpose, although several special instruments have been

<sup>5</sup> Gaz. Med. de Paris, 1859, 35, xiv, p. 26-30.

<sup>6</sup> Diseases of the Throat and Air Passages, N. Y., 1879, p. 99.

<sup>7</sup> The Principles and Practice of Surgery, Phila., 1871, p. 345.

<sup>8</sup> A Manual of Medical Jurisprudence, Phila., 1873, p. 377.

<sup>9</sup> A Manual of Pathological Anatomy, Philadelphia, 1855, Vol. 3, p. 74.

<sup>10</sup> Orth. A Compound of Diagnosis in Pathological Anatomy, N. Y., 1878.

<sup>11</sup> Nèlaton, Éléments de Pathologie Chirurgicale, 1844, classified burns according to their severity, and phenomena: a. Local phenomena. 1st, 2d, 3d, 4th, 5th, and 6th degrees. b. General phenomena, etc.

<sup>12</sup> Charleston, M. J. & Rev., 1855, x, 640.

invented. The calomel treatment still finds advocates, and it is strongly probable that after the acute period has passed, calomel may be of great advantage.

For some inscrutable reason mercurial inunction is still retained in the treatise on this subject as a useful remedy in cases of scalds of the mouth and larynx. If one believes with a noted old surgeon that all diseases originate in the liver, and therefore prescribe ipecac and blue pill for every thing, there is some sort of consistency in the practice, but with different views of pathology there is no good reason for the practice, which should be dropped from the text-books. Sponges wrung out of hot water are useful as a means of allaying pain after the danger of œdema has disappeared.

Ether treatment is the most promising, and I believe it will be found the most successful. It certainly cannot be much worse than the tracheotomy by Mr. Durham, where twenty-three out of twenty-eight cases perished after the operation from either bronchitis or pneumonia, and the ease and comfort given the patient is itself worth a great deal. The amount of dilution in any given case will be governed by the urgency of the case, and the age and strength of the patient, and the duration of its administration will depend entirely upon the pain and the tendency to laryngeal spasm.

After witnessing its very happy effects in the case just detailed, I certainly would place it first among the therapeutical resources in such cases.

## SPINAL CONCUSSION.

BY S. V. CLEVENGER, M.D.,

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In THE JOURNAL of Dec. 15, 1888, is published the Proceedings of the Chicago Medico-Legal Society of Oct. 6, 1888, beginning with a paper by Dr. James Burry, Surgeon to the C. S. F. & C. Railroad, who states that within five years \$11,000,000 have been paid as damages by English railway companies in cases of alleged injury to the spinal cord, and \$300,000 to the Chatsworth sufferers, among whom spinal injury cases preponderated. This may seem hard upon the railroad companies, but it would not be reasonable to suppose that the courts would have awarded such sums unjustly in all cases. Imagine the Jay Goulds of the world free to coin millions from the traveling public, unhedged by any fear of damage suits for carelessness, incompetence, or brutal disregard of human life.

Dr. Burry cites the case of Waterman *vs.* the Chicago & Alton R. R., wherein the defense was that the plaintiff had locomotor ataxia. Inas-

much as that disorder is spinal and may be caused by an injury, the verdict against the road may have been perfectly just. Parallel cases are cited by Spitzka, Gowers, Hoffman and Dana.

The case of Holland *vs.* the Chicago & Eastern Illinois R. R. to my certain knowledge was a genuine and typical case of spinal concussion, and the verdict of \$30,000 awarded him was little enough for the complete demolition of his health and everything in life worth living for.

The Rozenzweig case *vs.* L. S. & M. S. R. R. was evidently exemplary.

Dr. Steele's statement that Dr. Phillips was restored to health, "except for a slight lameness," after securing \$80,000 from the London & South-western R. R., implies that the verdict was excessive, which, in the absence of details as to the general mental and physical condition of Dr. Phillips amounts to nothing. "Health" to the casual observer may be restored, but usually in such cases the abilities required of a practicing physician would be lost. Erichsen's work is assailed as affording "overshadowing influence" and the erroneous pathological assumptions of that author are instanced against the general value of his book "Concussion of the Spine."

At the time Erichsen wrote, neurological pathology was undeveloped and so far as spinal concussion is concerned is still *sub judice*. It seemed justifiable to assume that organic lesions were behind the symptoms of the disease, inasmuch as extravasations and inflammatory changes in the cord produce allied neurotic conditions. If Erichsen went too far in guessing at the pathology of concussion he also states that "we should indeed be taking a limited view of the pathology of concussion of the spine if we were to refer all the symptoms, primary and remote, to inflammatory conditions, either of the vertebral column, the sheaths of the spinal nerves, the meninges of the cord or the substance of the medulla itself. Important and marked as may be the symptoms that are referable to such lesions as these that are *primarily dependent on molecular changes in the cord itself*, or spinal anæmia induced by the shock of the accident acting either directly on the cord itself, or indirectly, and at a later date, through the medium of the sympathetic, in consequence of which the blood distribution to the cord becomes disturbed and diminished."

The "molecular changes in the cord itself," which I have italicized above, constitute the cause of the symptoms at present assumed by pathologists, and Spitzka parallels it with the undemonstrable changes that devitalized the egg in railroad transit.

Surely it should not be claimed, when we do not know the pathology of a disease, that the disease itself does not exist, and yet in attacking the errors in pathology of Erichsen the clinical

symptoms of the disorder are ignored or denied. There is a similar inability to demonstrate the pathology of "spinal irritation," "neurasthenia," Landry's ascending paralysis, melancholia, and other grave disorders, but such inability does not abolish the ailments. Nor is anything proven by the fact that Erichsen has not revised later editions of his book, a common failing of authors for which there are many excuses.

Dr. Burry acknowledges that Page is equally faulty with Erichsen, a rather rare admission for a railroad surgeon to make. He claims that upon the "wholly imaginary pathological state, known as anæmia of the cord," is built up "a symptomatology equally vague and illusory," and then sweeps into this all the "mental, psychical and cerebral symptoms," and so on. *Is* the symptomatology of concussion built upon Erichsen's pathology? If we knew nothing of the pathology of pneumonia would its symptoms cease? There seems to be special pleading here.

Next comes the usual allusions to "corrupt practices, fraud, and defeating the ends of justice," as though claimants, almost always, and railway experts seldom, if ever, were corrupt.

In all the cases I have seen it would take a pretty good malingerer to pass the fire of medical inquisition the railroads are able to employ, aside from the *sometimes* bribed juries, of which we have notorious instances, in the corporation's behalf, and the *sometimes* very questionable practices of railway medical experts in ignoring evident symptoms, and even gross objective disorders, and avoiding anything like a scientific examination.

Dr. Lyman, in the discussion which followed, considered Page's book superior to Erichsen's. Page was a railway surgeon, and the very evident intent of his work was to counteract the effects of Erichsen in concussion cases. Dr. Lyman thought that many such alleged cases were cerebral or in other words hysterical. Erichsen characterizes hysteria as "a word which serves as a cloak to ignorance," something like our term malaria. But admitting that there is often an unhealthy emotional condition produced by spinal concussion, as part of the symptomatology, it does not make it any the less an undesirable consequence of the accident.

Westphal, Oppenheim, Rigler, Walton and Wharton Jones effectively disposed of this hysterical substitution for "railway spine," and as Dr. P. C. Knapp says: "Depression, anxiety, loss of memory, mental impairment, the tremor, the exaggerated reflexes, and the swaying with closed eyes, the pronounced paræsthesiæ, the vertigo and headaches (persistent headache being confessedly not a symptom of hysteria), nystagmus, vesical paresis, all these point to something besides hysteria." Drs. Wyllys Andrews and J. G. Kiernan answered many other points raised by the author of the paper.

The establishment of such a disease as spinal concussion does not rest upon Erichsen alone. The literature of the subject is accumulating and by excluding the frequent myelitis, meningitis, compression and other complications, the exact symptomatology is demonstrable, except perhaps to interested corporations.

Room 29, Central Music Hall, Chicago.

### CASE OF BREECH PRESENTATION (SACRO-POSTERIOR):

UNSUCCESSFUL ATTEMPT TO DELIVER THE AFTER-COMING  
HEAD BY DEVENTER'S METHOD.

*Read before the Medical Society of the District of Columbia, June 13  
1888.*

BY HENRY D. FRY, M.D.,  
OF WASHINGTON, D. C.

During the meeting of the Ninth International Medical Congress, held in Washington, in September, 1887, Dr. John Bartlett, of Chicago, presented a paper to the Obstetrical Section, entitled "A Study of Deventer's Method of Delivering the After-coming Head." The mechanism of this method was ingeniously demonstrated at the time by means of a manikin, and the impression conveyed to the members present was favorable as regards the feasibility of delivering the after-coming head by this means.

In the discussion which followed, Dr. Charles T. Parkes, of Chicago, reported three cases delivered successfully by Deventer's method after failure of the usual modes of extraction, and Dr. G. W. Jones, of Danville, Ill., mentioned his success in a similar number of cases. In the absence of any single method of delivering the after coming head, that is any method that is so successful as to receive the unqualified endorsement of the profession, it seems to me that Deventer's idea commends itself to us as a valuable aid in special cases. Having been an interested listener to Dr. Bartlett's paper, I determined to employ the method at the first opportunity, and I beg to report to-night the result of that trial.

In the fall of 1887, I was consulted by Mrs. J., who was several months pregnant, regarding the advisability of removing a pessary which she had been wearing for the relief of retroversio uteri. I decided not to disturb the support, and it was allowed to remain in position until several months later, when the fundus had reached a point above the sacral promontory, and all danger of a recurrence of displacement had passed.

Mrs. J., was the mother of five children, and all of her labors had been rapid. Her health had been much impaired on account of the uterine displacement, but since the introduction of the pessary, two years ago, she had been greatly improved. A cough, which she had been told was from weak lungs, had disappeared, she had in-



creased in weight, could take moderate exercise without fatigue, and her despondent spirits had brightened. She passed through pregnancy with little of its inconveniences, and at midnight, May 23d, I received a message that she was in labor. I lost no time in responding to the call, as, judging from the rapidity of her former labors, she had repeatedly expressed the fear that I would not reach her bedside in time to deliver the child. She had been awakened by the discharge of amniotic fluid, and when I arrived labor pains had only commenced.

Digital examination failed to reach the presenting part which was above the brine. Palpation revealed the foetal extremities applied to the mother's abdominal walls, and the head at the epigastrium. The back of the child could not be felt. The pains increased in strength and one hour later had forced the breech into the pelvic cavity. The penis and scrotum of the child were immediately behind the symphysis, further backwards was the anus, and in the mother's sacral cavity, was the sacrum of the infant. The hips failed to rotate, but passed down to the inferior strait transversely.

The patient was changed to the dorsal position and uterine contractions were supplemented by forcible manual pressure upon the fundus. In a short time the breech was born, passing through the vulva in its original transverse position.

The patient was again turned upon her left side; the body came through with a spiral motion and the right shoulder turned under the symphysis. As soon as the shoulders were delivered, the occiput having rotated forward, the child was drawn backwards towards the mother's perineum. The arms which passed up on each side of the head, were not disturbed, and while drawing the child in the direction indicated, efforts were made to bring the occiput down and deliver by extension. The attempt was unsuccessful, and not daring to risk the child's life by continuing my efforts in the same direction, the arms were brought down, the body carried forward toward the mother's abdomen, and delivery promptly effected by flexion of the head. The infant was well developed and cried lustily.

I have reported this case, although the attempt to deliver by Deventer's method was unsuccessful, because I think the fault may have been with myself and not the method.

The want of confidence which is natural to one's first experience with a new procedure, caused me to abandon it quickly when the head failed to come out by extension. Added to the want of confidence was the responsibility I felt that continued efforts might sacrifice the child, nor could I foresee whether or not further delay were in store for me by attempts to deliver in the usual manner, in case I were finally driven to it. In the hands of one practiced in the maneuver the result may have been different.

I shall repeat the experiment at the next opportunity, but with this difference, which is according to Deventer's rules, to place the patient in the dorsal position, the buttocks projecting over the edge of the bed, and to draw the infant downwards in the direction of the floor.

That the lateral position, however, is not a decided obstacle to the success of the method, is shown by the experience of Dr. Jones, reported in the discussion which followed the reading of Dr. Bartlett's paper. Referring to three cases he had delivered by the method in question, he said, they occurred with the mother upon the left side.

From the fact that the infant's pelvis was born with its transverse diameter in the direction of the short diameter of the outlet, it may be surmised that the infant was small. On the contrary it was well developed and weighed ten pounds.

Full particulars of Deventer's method will be found published in the "Transactions of the International Congress" (Ninth session, vol. 2, pp. 438-445).

One cannot read them without feeling that the obstetrician possessed a key to the easy delivery of the after-coming head. Deventer even declares that it is safer and easier to draw the infant out by its feet, even in head presentations, than to allow it to come head first.

## MEDICAL PROGRESS.

LANDERER ON A NEW METHOD OF TREATING TUBERCULOUS AFFECTIONS.—The object being to cause cicatrization by inflammation artificially caused, the author, after trials of many things, has fixed upon Peruvian balsam. Sayre's remarkable success with this in spondylitic abscesses induced the author to try it. Applied as a plaster to tuberculous ulceration of glands, Peruvian balsam, though having no action at a distance, causes rapid healing. Internal tuberculous foci were injected by the author with the balsam in the following form: *R. Bals. peruv., muc. gum. arab., āā i.o, ol. amygd. q.s., ut fiat emulsio subtiliss., sod chlor. o.7, aq. dest. 100.0.* This emulsion was used in parenchymatous and intravenous injections. In fifty-one cases the balsam was used. In sixteen the glands were affected, and the balsam was applied as a plaster; any fistula were injected with the balsam in ether, or packed with gauze saturated with balsam; treatment lasted four to twelve weeks, and permanent cure was obtained. Two cases of fungoid ulceration were cured by division, scraping and packing as before. Twenty-nine cases of bone disease included two of the spinal column, one psoas abscess, and one lumbar abscess (the former was injected with the balsam in ether, the

latter was plugged), and three of the hip-joint; all cured. The other cases are given all cured or greatly improved at the time of writing. The lung cases were four, two being far advanced, and these were greatly improved by intravenous injections (1.0 gram twice a week). Two slighter cases were cured. Bladder-tuberculosis was cured by two injections (10 cubic centimetres of a 2.5 per cent. emulsion). The patient is at work three years afterwards. The above-mentioned emulsion is thus used. Five or ten drops are poured into a porcelain capsule, and a 0.7 per cent. solution of NaCl (filtered and made alkaline by a drop of caustic soda) is added drop by drop till the emulsion is made feebly alkaline, the yellowish-grey emulsion taking a greenish tint. The whole is strained through linen, and is now ready for use. For intravenous injections each specimen must be examined microscopically, and, if fat-drops larger than red corpuscles be found, must be rejected. The diluted emulsion only lasts a few hours, but the concentrated keeps for weeks. Parenchymatous injections are made deep to the bone, or into the distended articular cavity, or into fungoid masses; the quantity is usually from half to one cubic centimetre. The injection is painless, or nearly so. Intravenous injections are made by a fine cannula into a vein of the arm after its distension has been caused by a bandage applied higher up the limb rather loosely. If a little swelling arises as the injection is gently made, the cannula is not in the vein, and had better be withdrawn and inserted somewhere else. The quantity must not exceed 1 cubic centimetre. This treatment is not warmly advocated by the author in cases of pulmonary tuberculosis which are far advanced.—E. J. EDWARDS, M.D., in *Lond. Med. Recorder*, Dec. 20, 1888.

**DISINFECTION OF SURGEONS' HANDS.**—A great deal has recently been said about surgeons' nails and nail-brushes in hospital wards. Bacteriologists have come to the conclusion that the usual washing of the hands with weak antiseptics is quite efficacious in killing pyogenic and specific germs on the hands, but does not destroy micro-organisms which lodge under the nails. Dr. Fürbringer, of Berlin, believes in washing the hands with soap, then in alcohol at 80° F., then in a sublimate solution. The alcohol is said to soak well into the nails. Drs. Roux and Reynès have tried experiments with alcohol on nails purposely infected. In 40 cases where the infection was experimental, and carried on in a laboratory, asepsis was proved in 33. In 8 cases, where infection was clinical, the hands being washed in the usual manner after touching infected fluids in wards, only 4 were proved aseptic after the above elaborate system of washing. Drs. Roux and Reynès nevertheless advocate this antiseptic ablu-

tion, noting that the nails are seldom so thoroughly rubbed after every operation as when an experienced physiologist cleans them after some special experiment. In all cases of enforced sanitary measures routine practices and habits must be taken into account.—*British Medical Journal*, December 22, 1888.

**SMITH ON TREATMENT OF PHTHISIS BY CARBOLATE OF CAMPHOR.**—Dr. R. Shingleton Smith records two cases of phthisis treated by subcutaneous and intrapulmonary injections of carbolate of camphor. Both cases improved greatly under the treatment. The injections consisted of ten, fifteen or twenty minims of a saturated solution of camphor in carbolic acid, and were at first administered subcutaneously, and afterwards into the lung-tissue about the diseased areas in the apices. The latter gave rise to no sign of lung irritation, and the subcutaneous injections produced slight smarting only. These were given at first every second or third day, but afterwards daily, and about fifty injections in all were used in the course of ten weeks, in the first case. In the second, the whole quantity injected in twenty-five days amounted to 245 minims, 60 minims having been diffused in the diseased tissues in the apex of the right lung. The intra-pulmonary injections were preferred by one of the patients, as they "did not hurt so much as the subcutaneous ones." A slight rise of temperature was observed after the injections in one or two instances, but no other evidence of irritation was noticed.—E. CLIFFORD BEALE, M.B., in *Lond. Med. Recorder*, Dec. 20, 1888.

**FATAL VOMITING FROM INTESTINAL STENOSIS.**—The following case is recorded by SMITH. A girl, æt. 18, was seized with uncontrollable vomiting, not feculent in character, for which no cause could be discovered. There was no fever, no meteorism, and no history of any intestinal trouble, except that the patient had on more than one occasion about a year previously passed blood with the stools. As all other treatment seemed useless, it was decided to open the abdomen. After a prolonged search nothing could be found, and a few days later death took place. At the *post-mortem* examination, the small intestine towards the lower part of the ileum was found to be narrowed for about an inch, so that it would scarcely admit the little finger.—*Centrblt. f. Chir.*, 1888.

**AN APPLICATION FOR BURNS**, suggested in *Centralbl. f. Therapie*, is the following:

Olive oil.  
Lime water. . . . . aa 6 parts.  
Salol . . . . . 1 part.

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SATURDAY, JANUARY 12, 1889.

LAPAROTOMY IN GUN-SHOT WOUNDS OF THE ABDOMEN.

In the columns of a recent number of our valued contemporary, the *Boston Medical and Surgical Journal*, there appears an article on this subject by DR. W. B. COLEY, who publishes an interesting series of tables relating to the treatment of these wounds. He has collected 74 cases and he divides them into three classes: 1, those operated upon within the first twelve hours; 2, those operated upon after twelve hours; 3, those in which the time is not stated. He quotes 39 cases in the first class, with a percentage of recoveries of 46.6 per cent. In the second class he quotes 22 cases, with a percentage of recoveries of 22.7 per cent. Class 3 contains 13 cases, with a percentage of recoveries of 57 per cent.

Dr. Coley refers to the opinions of M. Réclus, who claims that his experiments show that perforation is not necessarily present, and therefore laparotomy need not be performed unless the signs of perforation are unmistakable. Réclus advises that the following treatment should be pursued: 1. Firm compression of the abdomen to check hæmorrhage and fæcal extravasation; 2, administration of large doses of opium; 3, when this treatment fails, then resort to laparotomy.

Let us consider the grounds on which American surgeons advise operation. In the first place, the literature of the profession is clearly in its favor, although the pendulum of surgical opinion has vibrated back and forth.

"When a large Wound is made in the Cavity of the Abdomen, that not only lets out the Intestines, but also divides some Part of them, the Surgeon ought always to stitch up the wounded Parts of the intestines before he returns them. By this means we may not only expect the Wound to heal more readily, but the Discharge of Chyle and Fæces into the Cavity of the Abdomen, which would bring on great Mischief, is prevented."—*Heister*.

"But if the great intestines be wounded, and the excrements discharge that way, it may be reasonable to lay open the wound and stitch the gut with the glover's stitch, sprinkling it with some of the aforesaid agglutinatives, and reducing it back, stitch up the external wound of the belly, as hath been said."—*Wiseman*.<sup>1</sup>

"But the question may be asked here [in case of concealed wound] whether a surgeon may not prudently, in this case, enlarge the wound of the abdomen, that he may be able to discover the injured intestine, and treat it in a proper manner. Truly, I can see no objection to this practice, especially if we consider that upon the neglect of it certain death will follow, and that we are encouraged to make trial of it by the successes of others. Scacherus,<sup>2</sup> in *Programmati Publica*, Leipzig, ed. 1720, mentions a surgeon who performed this operation successfully."—*Heister*.<sup>3</sup>

"With very few exceptions bullet wounds into the abdominal cavity are fatal. It may be a question worthy of serious thought, in view of the hopelessness of our present practice, whether we ought not to cut boldly into the abdominal cavity, wash out the filth and, bringing the wounded intestines to the surface, endeavor to produce an artificial anus."—*Andrews*.<sup>4</sup>

"In examining the external wound, when no protrusion exists, should we find an escape of fæcal matter—which proves that the bowel has been perforated—the abdominal wound must be enlarged and the wound in the intestine closed by suture. This is the only expedient for saving life, for if the contents of the bowel are allowed to escape into the peritoneal cavity, a fatal issue must be expected."—*Chisholm*.<sup>5</sup>

"Already interference contrasts favorably with the do-nothing system. Reflection upon the results of ovariectomy, upon the results of gastrorrhaphy and enterorrhaphy, applied to protruded wounded viscera, leads unavoidably, in the writer's opinion, to a conviction of the propriety of incising the abdominal wall, when necessary, in order to expose and sew up the wounded gut concealed within the cavity, whether divided by a cutting instrument or shot. The obstacles to success are obvious, but it is a mortal peril which demands an extreme remedy."—*Olis*.<sup>6</sup>

"I have the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity, properly treated, than there is of a woman's dying of an ovariectomy, properly performed. . . . And by the application of the same rules that guide us in ovariectomy to the treatment of gunshot wounds penetrating the abdominal cavity, there is every certainty of attaining the same success in these that we now boast of in ovariectomy."—*J. Marion Sims*.<sup>7</sup>

"When any of these conditions are present, the duty of the surgeon is clearly to enlarge the opening in the abdominal wall or to make a new one in a more favorable location, sufficiently to admit of an examination of the viscera in the track of the wound, to detect and ligate bleeding vessels, to suture intestinal rents, and to thor-

<sup>1</sup> Wiseman, "Of Wounds of the Belly," book 5, chap. viii. London, 1676.

<sup>2</sup> This was a mistake. The author was Friderici, who made an inaugural address before Scacherus (*Olis*).

<sup>3</sup> Heister Laurentius, *Institutiones Chirurgicæ*.

<sup>4</sup> "Record of Battles Fought near Vicksburg," p. 34. Chicago, 1863.

<sup>5</sup> Chisholm, J. J., "A Manual of Military Surgery for the Use of Surgeons in the Confederate States Army," p. 350. Richmond, 1862.

<sup>6</sup> "Medical and Surgical History, War of Rebellion," part 2, surgical volume, p. 128.

<sup>7</sup> British Medical Journal, Mar. 4, 1882.

oughly cleanse the peritoneal cavity of extravasated matters."—*Pitcher*.<sup>8</sup>

"Primary abdominal section in the mid-line gives the best command over the damage done and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Further, its adoption adds, but little, if anything, to the peril of the injury.—*Parkes*."

"I desire now to call attention to the fact that operative interference for gunshot wounds of the abdomen has been put to a practical test and that it has been successful, and I hope that other members of this society may share my conviction that this plan of active treatment is now justified by these two successful cases, and that it should be adopted (within proper limits) to the exclusion of the 'let-alone policy.'"—*Bull*.<sup>10</sup>

"The known tendencies of penetrating ball-wounds of the viscera being admitted, the indication to operate follows of necessity on proof of the injury. By operation alone can the parts be put into such a condition that spontaneous recovery is probable, or it might almost be said, possible."<sup>11</sup>

"A penetrating wound of the abdomen, left without surgical interference, is attended always with great danger. If any vessels of size are divided hæmorrhage is an immediate danger, and peritonitis a serious and probably fatal complication. If the alimentary canal is opened, death is almost inevitable. The few recorded cases of recovery form such an infinitesimal proportion of the whole that they should carry no weight against interference. . . . If it [the wound] extend through the wall the abdomen should be opened and the condition of the viscera examined."<sup>12</sup>

In the second places, the experiments of GROSS and PARKES, particularly the latter, show conclusively that the relative liability to perforation and of hæmorrhage have not been overstated. It is an unsound argument to urge that because PARKE'S experiments were upon dogs, their teaching should be rejected, for those experiments referred particularly to the organ wounded, and did more to fix surgical opinion in this country than any that had preceded them. As to the question of diagnosis, we now have a certain means of detection of perforation in the use of the hydrogen gas as advocated by SENN. It is only in cases of hæmorrhage that there can be uncertainty in the diagnosis—and unfortunately, this is of somewhat frequent occurrence. The evidences of severe shock or syncope would certainly be conclusive testimony as to the wound of a large blood-vessel, but in wounds of the smaller vessels, hæmorrhage going on insidiously, would almost as certainly prove fatal, as cases with the more pronounced symptoms. Nor would we feel safe in trusting such a patient to the results of the application of a body bandage,

however snugly it may be applied. The dangers of median exploratory laparotomy are by no means great, and if it is found there is neither wound of intestine nor blood-vessel, the patient will run little additional risk, provided the operation be performed by an experienced operator.

It is gratifying to add, that as Americans we take pleasure in recalling that our Dr. Kinloch was the first in recent times to practice the operation, and that following Kocher's successful case, were two successful cases in 1885, one each by BULL and HAMILTON, in the order named, and BULL in the same year had the fourth successful case, and that the results of the experiments of our PARKES and our SENN have placed the teachings of American Surgery once more in the van, where McDowel placed it a half century ago.

#### THE INFANTICIDE REVELATIONS.

"O wad some power the giftie gie us  
To see oursels as ithers see us.  
It wad frae mony a blunder free us  
And foolish notion."

The wish of Burns has been vouchsafed to several physicians of Chicago during the past few weeks, and to a few the glance in the mirror has not been a pleasant one.

One of the daily newspapers of this city, the *Chicago Times*, sent out a presumably captivating young woman who acted as a reporter for that paper to visit certain physicians and registered midwives. She represented that she was unmarried, of good family, that she had lapsed from the path of virtue and in consequence was now six weeks *enciente*. The tale was told with many a pearly tear trembling on her pretty little eyelids, and the physician interviewed was requested to relieve her from the consequences of her fault. A few readily consented, some gave the attractive young woman a moral lecture, others sent her away brusquely, and a few told her of persons believed to be engaged in the abortion business, and got rid of her as quickly as they could. The enterprising young person printed the respective interviews, in her own language, which in some instances made rather sensational reading and as a whole seem to convey the impression that the views of the medical profession as a body are more lenient toward the sin of abortion than they should be. It should be remarked, however, that

<sup>8</sup> Pitcher, Lewis S., "The Treatment of Wounds," pp. 356-7. New York. 1883.

<sup>9</sup> Parkes, Chas. T., "Gunshot Wounds of the Small Intestines." Chicago. 1884.

<sup>10</sup> New York Medical Journal, Feb. 14, 1885.

<sup>11</sup> Greig Smith, "Abdominal Surgery." Second Ed. London. 1888.

<sup>12</sup> Wyeth, "Text-book on Surgery." New York. 1887.

a large proportion of the older members of the profession were not approached. Those comparatively unknown were most frequently reported, and the statements now published will have to be substantiated in the courts, as one of the physicians implicated has begun suit against the *Times*; until then it will be well to suspend judgment.

It is a thankless task to expose so fearful a secret crime, but the *Times* has done well to bring public attention to the evil consequences of allowing abortionists to go on unchecked in their career of crime. But all the parties to infanticide are equally guilty, the instigators as well as the perpetrators, and while we look with pity on the unfortunate doctor whose weak sympathy leads him to commit crime to prevent disgrace to an unfortunate young woman; and with horror upon the professional scoundrel who makes it a business, let us also condemn the other party to the act. There can be no premeditated infanticide without the coöperation of the unwilling mother, and while hers is not infrequently the worst punishment it must be remembered that she deserves it. *The crime begins, therefore, with those who solicit the practice.* And it would have a wholesome effect if physicians instead of being gentle with such persons and delivering free moral lectures to them, would simply hand them over to the police.

It is all very fine to feel a deep sympathy with the best patron, Madame Cræsus, whose social life might be inconvenienced, or for one to have a tender feeling for the blooming Mademoiselle Dive, who is fearful of being disgraced publicly when the private disgrace is already hers, but such sympathy and tenderness are not common sense, and common sense is needed in dealing with the frail diplomats who come into a physician's office with a whole cargo of sighs, tears, cajoleries and entreaties. The times have changed since the Revolutionary days, when early marriages and large families were deemed as evidences of patriotism. Our people have forgotten that it is patriotic to have large families, and in consequence we see that it is the foreign population in our midst that have the bulk of the increase. Large families are now rare in American households, and while public sentiment remains blind to this growing evil it is useless to expect that the murderous trade of the abortionist may be extinguished.

The work of the *Times* is therefore to be com-

mended, not less as an effort to arouse the public to a realization of the effect of continued popular apathy on this subject, than to expose the guilty.

The medical profession of Chicago, who do not claim to be better, are no worse than elsewhere. They have come out of this investigation better than would those of some other cities we could name; but whether a similar investigation is set on foot elsewhere or not, it is self-evident that if there were none to be patrons, there would be no abortionists.

Popular education on this subject should therefore at all hazards be stimulated rather than suppressed, and the erring should be taught that a "blush on the face is better than a blot on the heart."

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#### EDITORIAL NOTES.

WORK FOR THE ASSOCIATION.—The American Medical Association is growing rapidly and yearly gaining in power, but it requires work by the members to increase it so that it shall become the greatest medical society in the world. We urge the members of the Association to look about them and whenever a member of a local society in good standing is found who is not already a member, urge him to send on his application to the Treasurer DR. DUNGLISON, without delay. Look at the example of the British Islands, and think what an association the medical men of this country could make if they only set about it in earnest!

THE NEW MARINE-HOSPITAL SERVICE LAW.—The following is the Act to regulate appointments in the Marine-Hospital Service of the United States which has just become a law:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That medical officers of the Marine-Hospital Service of the United States shall hereafter be appointed by the President, by and with the advice and consent of the Senate; and no person shall be so appointed until after passing a satisfactory examination in the several branches of medicine, surgery, and hygiene before a board of medical officers of the said service. Said examination shall be conducted according to rules prepared by the Supervising Surgeon-General, and approved by the Secretary of the Treasury and the President.

"SEC. 2. That original appointments in the service shall only be made to the rank of assistant surgeon; and no officer shall be promoted to

the rank of passed assistant surgeon until after four years' service and a second examination as aforesaid; and no passed assistant surgeon shall be promoted to be surgeon until after due examination: *Provided*, That nothing in this Act shall be so construed as to affect the rank or promotion of any officer originally appointed before the adoption of the regulations of eighteen hundred and seventy-nine; and the President is authorized to nominate for confirmation the officers in the service on the date of the passage of this Act."

From the above it will be seen that hereafter there is but one way to enter the Marine-Hospital Service and that is through the portals of the Medical Examining Board.

THERE are a little more than eighty thousand persons practicing medicine in the United States, of whom more than sixty thousand are regular practitioners. When one-third of the regular profession are members of the American Medical Association we can have the strongest organization, and the best medical journal in the World.

CHICAGO MEDICAL SOCIETY.—The Chicago Medical Society at its meeting held Monday, January 7, took action on the following report of the Judiciary Committee:

"MR. PRESIDENT.—At the last regular meeting the Judiciary Committee was formally instructed to investigate the truth of the scandalous newspaper charges against the moral and professional integrity of certain members of the Society, to the effect that they had consented to produce criminal abortion on the person of a young woman newspaper reporter in the employ of *The Chicago Times*.

"Of all members of the Society who have been thus publicly accused in *The Times* newspaper only one has appeared before your Committee and demanded a hearing—Dr. Andrew J. Coey. Your Committee has fully and fairly examined the charges against this gentleman and found that that the interview actually occurred, as published, and that the report of it is substantially true in every particular and is so acknowledged to be by Dr. Coey.

"The report of the interview shows that Dr. Coey neither consented nor refused to perform criminal abortion, but he made an appointment with the young woman for the following day, ostensibly for the purpose of examining her and ascertaining whether any impediment existed to the safe induction of abortion. This appointment appears to justify the inference that if no pathological peculiarities had been found he might have been willing to take charge of the case.

"This inference is not supported, however, by any specific committal on Dr. Coey's part. On the contrary, that his apparent intention was not his real intention is clearly proved by what followed; for in the same minute that the young woman was discharged from his consultation-room, Dr. Coey denounced her as an adventuress of some kind and expressed the opinion that she was not pregnant at all to his office companion, Dr. E. V. McDonald, who was sitting in the reception-room at the time and had seen the young woman as she passed through.

"Furthermore, Dr. Coey took immediate measures to secure the presence of a police officer in his office at the

hour fixed by the appointment with the young woman on the following day. The police officer was present and under instructions from Lieuts. Shea and Kipley, of the police force, to keep track of the young woman if she were really found to be pregnant, and learn if and by whom criminal abortion was induced; and if she were not pregnant, as was suspected by Dr. Coey, to intimidate her into divulging her purpose in visiting him. All evidence is in the form of affidavits, and your committee does not question the accuracy of a single statement; hence the charges against Dr. Coey's character which are embodied in the headlines of the reported interview, and in various editorial discourses upon the same, are not only not justified by the language of the interview, but are shown by the events which followed to be without foundation in fact.

"Your committee also reports that it has investigated the professional status of Dr. E. H. Thurston quite independently of the allegations against his moral and professional character which appeared in the *Times* newspaper, and found that he is not worthy of membership in this Society. Your committee recommends, therefore, with the full concurrence of Dr. Thurston, that he be summarily expelled. Respectfully submitted."

The report is signed by Drs. William E. Quine, chairman; E. J. Doering, and A. H. Foster.

HE ACCIDENTALLY SWALLOWED A TOOTH.—A special to the *Chicago Tribune* from Galena, Ill., says: John Edwards, an Illinois Central engineer, who was supposed to be dying of quick consumption, in a paroxysm of coughing last night emitted from his throat a bony substance, which, on examination, proved to be a large double tooth. A few weeks ago Edwards underwent the operation of having his upper teeth extracted for a false set, and during the operation, which was rapidly performed, one of the teeth, without the knowledge of either the patient or operator, dropped down the throat, it is supposed, and lodged in the windpipe, where it caused the irritation which was thought to presage consumption.

OBITUARY.—On Saturday afternoon, December 1, Dr. William M. Brinton, President of the Allegheny County Medical Society, died at his residence in Sharpsburg, after a short illness, of typhoid fever. Dr. Brinton was graduated at Jefferson Medical College in 1875, and immediately thereafter began practice in Sharpsburg. Dr. Brinton joined the American Medical Association in 1886.

Mr. Jordan W. Lambert, of the Lambert Pharmacal Co., of St. Louis, died in that City January 6, 1889. Mr. Lambert was one of the leading pharmacists in the United States, and an active and energetic business man. He will be greatly missed.

\* Dr. Thurston is not a member of the American Medical Association.

## SOCIETY PROCEEDINGS.

Gynæcological Society of Boston.

*Regular Meeting, June 21, 1888.*THE PRESIDENT, HORACE C. WHITE, M.D., IN  
THE CHAIR.DR. WILLIAM G. WHEELER, of Chelsea, Mass.,  
read a paper on

## SEPTICÆMIA,

of which the following is a brief abstract :

I wish to present one case to emphasize the following points :

First.—That blood poisoning may, and does, complicate low forms of disease, as in dysentery, typhoid fever, etc.

Second.—That septicæmia often complicates the after-treatment of ovariectomy, and is more frequently a cause of death than was formerly supposed.

Third.—Blood poisoning increases the hazard, and has been considered by some a bar to surgical interference with extra- and even intra-uterine fibroids.

*Case 1.*—My patient, a woman æt. 35 ; married five years, had no children. Menstruation regular but scanty ; thin in flesh ; general health fair. Her trouble was a mono-cyst, ovarian in character, of about three years' growth, weighing with contents about 20 lbs.*Operation.*—I found extensive firm adhesions on the right side, both front and back, also to omentum and portions of small intestine. One layer of cyst wall was left attached to colon. The pedicle, which was not large, was transfixed, tied and replaced in cavity. I was obliged to tie eighteen bleeding points upon the omentum, fine cat-gut ligatures being used. The incision was 4 inches in length, which was closed with No. 9 silver wire sutures.

In twelve or fifteen hours later the patient had rallied from the operation, with slight vomiting and comparatively little pain, followed by a reasonable amount of sleep. The pulse and temperature were little disturbed, until the sixth day the symptoms were favorable, when tenderness and pain began in the right lower abdominal region. There was increase of temperature and pulse, great restlessness, with insomnia. The stomach and bowels became irritable, followed by great prostration, chills, sweating, and delirium, which symptoms continued to increase in severity until the tenth day, when the patient passed into a comatose state.

On the morning of the eighth day, four days after the appearance of the septicæmic symptoms, I detected a fulness in the right lower abdomen just under where the adhesions

were found. I immediately removed two sutures from the lower angle of my incision and passed into the cavity a new English catheter ; by this means I was enabled to evacuate two or three ounces of a thin fluid (*not pus*) about the color of prune-juice, having an unpleasant foetid odor. The cavity was then washed out with a solution of carbolic acid two or three times, alternating with boracic acid.

From this hour all of those symptoms of septicæmia which had been so pronounced and threatening soon became milder ; the temperature lowered, the stomach and bowels quieted ; gradually the mind cleared, strength returned slowly, and, as it were, the patient came back to life again, making a gradual recovery. In three months from the day of operation she returned to her home and friends.

First.—In the examination of over 100 reported cases of blood poisoning, I find that in almost every case the patient's system was in a depraved condition, either due to old age, overwork, or a shattered nervous system. My experience has been that anæmic patients are very susceptible to the influence of and rapidly take on those conditions which tend to produce the most profound septicæmic symptoms. In any case where the blood condition is below the normal standard, following or due to low forms of disease, such as typhoid, etc., I believe that septicæmia will inevitably follow any capital abdominal surgical operation. It behooves us all to look well to the general condition of our patients before attempting any surgical operation.

Second.—It was formerly taught that death following abdominal section was always due to surgical shock. J. Marion Sims was the first surgeon to refute this idea. In my opinion a large percentage of the deaths were due to septicæmia, as in my own experience I have seen the most profound symptoms of shock relieved as by magic upon the evacuation of pent-up pus from a cavity and the institution of prompt and effectual drainage. In this case reported above had I not reopened my incision and improvised a more perfect system of drainage my patient would soon have been enrolled with the many victims to surgical shock, *according to the old teaching*. On the other hand, this was a typical case of septicæmia following ovariectomy, where life was saved by prompt drainage. We may lessen the number of cases of septicæmia by instituting at once the *most thorough drainage system possible*.

Third.—For the above reasons, viz., depraved system and poor drainage systems in use to-day, coupled with a lack (on the part of our surgeons of the present generation) of that physical determination, which will induce him to adopt such measures as shall enable him to cope with such conditions as may arise. To overcome this seeming bar to surgical interference with fibroids : 1.

We ought to study well our patient. 2. We should familiarize ourselves with the minutest detail of the operation. 3. To adopt the surest system of drainage. *Insist upon perfect drainage*, and I am sure that septicaemia will be a condition rarely encountered.

DR. L. F. WARNER said that he had been much interested in the paper. The products of a wound, including the serous discharge, become poisonous when separated from the living body. The object of the older surgeon in allowing a wound to glaze by exposure to the air was to prevent any oozing into the wound cavity, and thus to prevent poisonous changes. The corrosive sublimate solution of the modern surgeon acts in the same way by coagulating the albuminous elements of the tissues. These poisonous changes in the discharge from wounds take place very rapidly and the fatal result may occur very early. The exact character of this septic fluid is not known, and we do not yet know accurately what changes occur.

DR. H. C. WHITE said there are undoubtedly many forms of septicaemia which are not yet recognized; diphtheria, in its later stages at least, is a form of septicaemia. His treatment of this disease has been on this theory, and its success had strengthened his belief that all diseases of a septic character can be best treated by remedies which are directly antagonistic to the agents which cause the disease. The most common of these remedies are acid sulphurous, the sulphites, the hypophosphites, etc. Experiments have proven that septic material injected into animals causes death, while exactly similar matter injected into an animal which is under the influence of antiseptic remedies does not cause death. Whenever you succeed in securing the full effect of such remedies in diphtheria, recovery may be expected.

DR. R. C. McDONALD had used sulphurous acid and the sulphites with success in different forms of septicaemia.

DR. A. P. CLARKE said that without doubt antiseptic remedies and agents were used prior to our day, but with no definite understanding of their origin or mode of action. Even Lister believed the germs of disease came from the air, but more recent investigation shows that the infection of wounds more usually results from unclean hands and instruments. Dr. Clarke said that he had no faith in the use of antiseptic drugs which act through the circulation.

DR. HANSCOMB asked if it were possible to change the blood with antiseptic agents to an extent sufficient to affect the general system.

DR. L. F. WARNER replied that we could kill our patient before that end was gained.

DR. H. C. WHITE said that our object in the use of such agents was to so sterilize the field that germs can not live.

DR. M. L. BROWN believed that we do not have

sufficient local treatment in diphtheria. The disease is local at first, and vigorous local measures may cure it.

DR. JACKSON, of Fall River, a guest of the Society, said that his ideas in regard to the exact character of septicaemia were shadowy. The first practical question which should be investigated is: By what avenue does the disease germ enter the body? Is it by the air, by instruments, or is it developed in the organism itself? When this question is settled, then our remedies or agencies can be intelligently directed to guard the system from infection. In some forms of septicaemia sulphurous acid and the hypophosphites are of great value.

DR. L. F. WARNER, in referring to cholera, said that he had no fear of the germ if it did not find a suitable home. As cholera will not develop in the skin of a perfectly healthy person, and the pollen of a toadstool will not germinate unless it finds congenial soil, so cholera will not attack a person who is well and who lives among hygienic surroundings. Something must prepare the field for this disease, as bad air, imperfect drainage, and improper food.

DR. F. C. BURT said that we do not know the exact cause of trouble in wound infection, neither do we know the exact relation of microbes to these changes. We do know, however, that germs always appear in wounds thus affected. Dr. Burt had had no experience with septicaemia in operative work. There is no case of operation without some elevation of temperature, but it is a question whether the condition is identical with the process usually known as fever.

DR. W. SYMINGTON BROWN said that the paper was a very practical one. In considering a question like septicaemia there were two elements to be treated, *i.e.*, the theory and the practice. In the past we have had too much theory. The captain of an ocean steamer uses only known facts in controlling his vessel, so the surgeon should depend solely on what is actually proven in his work. A man has only a certain amount of mental energy. If then a great part of this is expended in the study of theories, he has less to apply to the more practical work of his calling. There is much we do not know in regard to poisoning by germs, but we do know that gases developed in the animal organism may cause death.

A TOOTH AS A SOUVENIR.—As this is the season of the year for exchange of gifts, St. John's county comes to the front with the most novel on record. A young man near St. Augustine, though having sound teeth, had them to near for beauty, so he had his eye teeth extracted, took them to a jeweler, where they were polished, dyed and mounted in gold as a pair of earrings for his best girl.—*Savannah News*.





often overlooked. A torpid condition of the liver is often found. Many remedies might be named. He would call especial attention to the use of arsenic by hypodermatic injections and suppositories in persistent cases which had resisted the same remedies given internally. In cases where the disease is limited in extent and the infiltration marked, hypodermatic use of arsenious acid or arsenical salts two or three times a week, increasing the dose from one-tenth to one-half grain, has proved beneficial. In cases where this has not been permitted he has had good results from giving by the rectum an arsenical salt, increasing the dose from one-fourth to one grain every other day.

There is another class of remedies, namely, the surgical or mechanical method. These are massage, faradization and galvanism. Old cases where other remedies have failed have yielded to massage, the skin becoming soft, and the infiltration disappearing. In other cases the faradic current has been equally successful. Galvanism with a strength of ten, fifteen, or even twenty cells, pressed lightly upon the skin has afforded as ready relief as massage.

DR. RAVOGLI said, in considering the etiology, it is necessary to look at the general condition of the individual. The same cause often works different in different individuals. This is due to the general condition of the skin, whether it is soft or tough. Thus we find that age makes a difference. The symptoms in children are entirely different from those in adults. It is more acute in children, and in old age more chronic and inclined to the scaly form. He did not believe in a scrofulous eczema. Eczema is a catarrhal condition of the skin. Scrofulous subjects may, however, be more predisposed to eczema. Obstacles to the circulation, as scars, fractures, and varicose veins, are sometimes a cause of eczema. Had had excellent results with the use of salicylic acid and resorcin in eczema of children.

DR. REYNOLDS, of Chicago, said that the causes of eczema were both local and constitutional. He relied most upon the local treatment, never losing sight of the constitutional condition, which may aggravate or prolong the disease. For the local treatment, he divided eczema into acute, sub-acute, and chronic cases. The treatment of the first was soothing, of the second soothing and mildly stimulating, and of the third stimulating. The other constitutional conditions, of course, require their proper treatment.

DR. RICKETS, of Cincinnati, said that he had seen a number of cases in the city during the late epidemic of typhoid fever, and had invariably found an excess of acid in the urine. What relation there was between this fact and the eczema he did not know.

DR. FLEISHNER, of New Haven, said that the gouty eczema was a new form to him. That

eczema was due to blood-stasis, either venous or arterial. He believed struma a cause. He considered that Hebra's experiment in the production of eczema proved nothing, nor was it established that it was caused by special occupations. Such coincidences might be due entirely to similarity of conditions. In the treatment he had found arsenic of great value, but he uses it less than formerly. He believed in the three-fold division of the disease. He had obtained good results from mild external treatment, especially from the use of the ointment of rose-water. In some cases he found great benefit from free purgation.

Dr. William T. Corlett, of Cleveland, O., read a paper on

A CLINICAL STUDY OF SO-CALLED PRAIRIE ITCH, LUMBERMAN'S ITCH, ETC., WITH A CONSIDERATION AS TO ITS ENTITY.

(See THE JOURNAL, vol. xi, p. 517.)

DR. ZEISSLER opened the discussion of Dr. Corlett's paper by saying that the cause of the so-called prairie itch was ignorance in regard to skin diseases. The doctor related several incidents showing the ignorance of many of the general practitioners with regard to dermatology.

DR. REYNOLDS said that his practice in the West had given him opportunities for seeing many cases of this so-called new disease. He had always found that this diagnosis was made by men who were not especially well posted in dermatology. All the cases of prairie itch he had ever seen, were typical cases of eczema. He saw little of scabies, but many cases supposed to be scabies were, in reality, eczema. The peculiarity of the prairie itch is the appearance of contagion, which is thought to distinguish it from eczema. This imaginary contagion may be due to the fact that all of a family are under the same hygienic, dietetic, and local conditions. Itching seems to be almost contagious, and the scratching ensuing may occasion a disease of the skin.

(To be concluded.)

Medical Society of the District of Columbia.

*Stated Meeting June 13, 1888.*

DR. C. W. FRANZONI, IN THE CHAIR.

DR. JOHN B. HAMILTON read a report of TWO CASES OF SCALDING OF THE AIR-PASSAGES BY THE ACCIDENTAL INHALATION OF STEAM, WITH REMARKS.

DR. HENRY D. FRY read a CASE OF BREECH PRESENTATION (SACRO-POSTERIOR).

(See pages 49 and 51.)

DR. SMITH said there were two questions to be considered in connection with the paper read by



Dr. Fry. The first is, Was this case one calling for the application of Deventer's method? The other, Was Deventer's method followed in the treatment of this case? Having studied Deventer's method he had come to the conclusion that it was not an efficacious one. In only a small proportion of head-last cases was interference called for, and these were usually cases in which extension had taken place and the chin become fixed above the symphysis. Dr. Smith would not admit that a method which permitted the arms to be applied to the sides of the head, and thus increasing the bulk of the body which had to pass through the pelvis, was founded upon a scientific basis. Cases in which the followers of Deventer would apply force in effecting delivery, Dr. Smith would leave to the natural forces. If satisfied that the woman was not able to extrude the head of her child, he would apply forceps with the expectation of effecting delivery in a more satisfactory manner. He did not approve of the manner of Deventer, but did most cordially endorse the use of forceps to the after-coming head.

DR. FRY, in closing the discussion said, the little experience he had had in using the forceps in head-last cases bore out the testimony of Dr. Smith. So far as the application of the instrument was concerned, it was little if any more difficult than in head-first cases. But instrumental aid is only employed after having failed to deliver the head by the usual methods. The important question is, What is the safest and quickest mode of effecting delivery manually? Now Deventer's method offers several advantages. Dr. Busey has mentioned the protection of the vessels of the infant's neck and of the umbilical cord. Another is the "fender" effect of the extended arms, that is, the arms by bridging over the constriction formed by the neck prevent the cervix from contracting and holding the head. This is sometimes a cause of fatal delay in head-last births. Still another advantage is the gain in time over the common method of bringing down the arms. This is sometimes a very difficult maneuver and the child may die before it can be accomplished.

I fear from the objections Dr. Smith made to leaving the arms extended that he has not carefully studied the mechanism of Deventer's method. His objection would hold good if the purpose were to deliver by flexion of the head; the arms would then oppose the movement. In delivery by extension, however, they are not in the way; by the shoulder attachment they act as levers, so that when the body is drawn in the proper direction the head tends to glide forwards between the arms and the occiput to slip out under the symphysis. Dr. Smith objects to *dragging* out the after-coming head. The force applied in this method is not for the purpose of pulling the head out in the axis of the outlet; it is simply to inaugurate the movement of extension. By draw-

ing the child's body backwards and downwards we depress the occiput and raise the chin—this supplemented by strong uterine and voluntary efforts delivers the head by extension.

I would state that anæsthetics were not used in this case and that my attempt to deliver the child was freely seconded by the voluntary efforts of the patient. I have said my confidence in the superiority of this maneuver over the ordinary methods of manual delivery of the after-coming head was not lost in consequence of this failure. I shall try it when occasion offers and will place the patient in the dorsal position, instead of the lateral, although, as shown, the latter is not opposed to the success of the undertaking.

### Obstetrical Society of Philadelphia.

*Stated Meeting, Thursday, November 1, 1888.*

THE PRESIDENT, T. M. DRYSDALE, M.D.,  
IN THE CHAIR.

DR. MONTGOMERY reported a case of

#### VAGINAL HYSTERECTOMY,

with the following history: Mrs. M., a patient of Dr. T. O. Noch, 40 years old, the mother of five children and the victim of a large number of miscarriages, has been suffering for the last six years with frequent hæmorrhages, which for the past few months became almost continuous. He saw her in consultation with her doctor some months since, and upon examination found an excoriation on the posterior lip extending into the uterine canal. It was advised that the surface be touched with chromic acid and subsequently treated with soothing applications; if there was not rapid improvement following this course, a section should be removed for microscopical examination. Failure to arrest the disease and the demonstration of the presence of epithelioma by the examination of a competent microscopist, led to the decision to proceed to the extirpation of the organ. October 4, at the request of Dr. Noch, and assisted by him and Drs. West, Rively and McCroskey, he had performed the operation. The patient, anæsthetized, was placed in the lithotomy position, the vagina separated by retraction and the cervix transfixed by a ligature. The vaginal mucous membrane was cut through, encircling the cervix, the submucous tissue separated to the peritoneum in front and back, the broad ligament cut laterally sufficiently to make sure to free the ureters from injury in securing the ligaments. The opening was now made into the peritoneal pouch posteriorly and a large sponge inserted, two fingers inserted pushed the fundus forward and the opening anterior was completed. A pair of strong forceps, so constructed as to make equal pressure in their

whole length, were applied upon either side of the uterus, and the organ removed. Some vessels not included in the compression forceps continued to bleed so that a number of small forceps were applied. In all some eight forceps were applied and left hanging from the vagina. The sponge was withdrawn from the pelvis and the vagina lightly packed with iodoform gauze. The small forceps were removed at the end of thirty hours, and the large ones in sixty. The convalescence of the patient was uninterrupted and without event. The highest temperature reached was  $100^{\circ}$ , on the third day.

DR. MONTGOMERY also presented a case of

#### SUPRA-VAGINAL HYSTERECTOMY.

The woman, *æt.* 29 years, married, never pregnant, has been suffering for several years from severe menorrhagia. One year ago he saw her with Dr. Strittmatter, and upon examination found a large fibroid uterus. She presented evidences in her blanched face of having suffered from severe hæmorrhage. The removal of the uterus, supra-vaginal, was advised. She was advised by her friends to consult other parties, who informed her that such an operation would be certainly fatal and advised the removal of the ovaries. The hæmorrhage still continuing, she went to Dr. Strittmatter's private hospital, and at his request Dr. Montgomery performed the operation, in which he was assisted by Drs. Strittmatter, Moylan, and Messrs. Starkey and Sangree, medical students. An incision was made about six inches long, and the tumor with difficulty lifted up. The ovaries were enlarged, cystic, adherent and behind the uterus. The removal of the uterus was more readily accomplished than would have been the removal of the ovaries. With the purpose of returning the pedicle, the neck of the uterus was surrounded with a rubber ligature and the tumor removed, leaving two large flaps; these were sewed together by a number of continuous sutures of catgut until the flaps were completely coapted. Upon the removal of the ligature, however, there was so much bleeding that it was thought better to use the Tait clamp. The peritoneum was sewn fast to the stump of the uterus below the clamp. One ovary had been removed and the other, owing to extensive adhesions, was permitted to remain. The wound was closed with silk-worm gut, dusted with iodoform and covered with iodoform gauze and absorbent cotton. She stood the operation fairly well and suffered but little from shock. The following day the temperature was over  $104^{\circ}$ . Believing it to be due to the dressing, Dr. S. applied a carbolyzed gauze dressing, and the next day the temperature was  $99^{\circ}$ . Her subsequent convalescence was all that could be wished for, and the wound has now healed, with the exception of the lower angle, where the stump was fastened.

DR. MONTGOMERY read the history of a case of

#### TUBAL PREGNANCY

for Dr. Noch.

Mrs. —, 28 years old, married, has had four children, labors normal. Had menstruated regularly until August 17 last, with no evidence of it since that time. She thought herself pregnant and felt nothing unusual. She arose one morning from her bed and fell to the floor. She went back to bed and, not improving any, Dr. N. was sent for. He found her with a very pallid, pinched and waxen-like condition of the face; body and extremities cold and perspiring. Respiration was very rapid and shallow and the breasts cold; heart-beats regular but very weak; pulse small and compressible, and very rapid; temperature under  $94^{\circ}$ . There was marked stupor, but she could be roused, with difficulty, to answer questions. The uterus was somewhat enlarged, cervix slightly softened, and there was a gradual oozing from the os of a coffee-colored fluid. She had very little pain, but felt extremely weak. Her whole appearance indicated internal hæmorrhage. The diagnosis of tubal pregnancy with rupture was made. Laparotomy was considered, but deemed useless for fear the etherization would cause heart failure and death on the table in consequence. Diffusible stimulants were freely given and the local application of heat was used, in the hope that reaction might occur and laparotomy be possible. She continued to fail and died at 10:30 P.M., never having recovered from her shock. The post-mortem revealed an abdomen filled with blood clots. A small foetus was found in the left inguinal region, floating in its sac, which was still unruptured. The tube was found to be ruptured midway between the uterus and ovary, leaving the placenta still in the tube. Development had advanced to about the seventh or ninth week.

DR. MONTGOMERY then exhibited a clamp he had devised for clamping the broad ligaments in cases of vaginal hysterectomy. The two blades were each grooved and could be closed with a parallel motion. They were joined at the top by a permanent joint. The surfaces of the blades were long enough to include the whole ligament in one grasp.

DR. WM. GOODELL was sorry he had overlooked the fact that Dr. Montgomery had a case of this kind to present. He should like to have brought a pair of Doleris' forceps which he received through the kindness of Dr. Lusk. It is a clamp analogous to the one shown, but it has the obstetric lock. The blades can be disarticulated, and one of them ends in a short hook by which the broad ligament is caught at its upper edge and brought down. He had not had occasion to perform the operation since he had received the clamp, but he had had two cases, one of which was fatal. The operation with the ligature was a tedious one,

and the use of the clamp must shorten it. He believed that we were indebted to Richelot for the clamp.

DR. J. M. BALDY asked how Dr. Montgomery would apply his clamp. It was much like the one figured in Greig Smith's book, except that it was permanently locked above at the joint, where Smith's could be taken apart, one blade introduced on each side of the ligament, and then the joint made above. He could not see how this one could be easily applied unless the abdominal cavity were opened and it was slipped down from above.

DR. WM. PARISH had seen the description of a clamp with separable blades, the deviser of which he could not recall. One of the blades has a long fenestrum open at the distal end, and the other blade fits into this open space. This gives uniform compression of the broad ligament. With the instrument shown the compression may not be uniform.

DR. MONTGOMERY said that in the majority of cases there was not much infiltration of the ligament. After cutting the ligaments in the manner described, the uterus can generally be readily everted and the fundus of the organ brought to the vulvar orifice, and the clamp applied from the outside. Even in those cases in which the ligament is not readily drawn out, he saw no reason why the instrument should not be pushed into the abdominal cavity and one blade brought down on each side of the ligament. If the instrument was clean it would do no harm to the peritoneal cavity.

DR. BALDY said that the specimen of tubal pregnancy was interesting as demonstrating Tait's theory of the pathology of extra-uterine pregnancy. Tait holds that rupture takes place into the broad ligament, and that the foetus then goes on to develop or a secondary rupture subsequently takes place into the abdominal cavity. This process is most beautifully shown in this specimen. The cavity of the tube and broad ligament form one, and the rupture has taken place into the peritoneal cavity.

DR. H. A. KELLY described some *glass catheters*. Some five years ago he was hard pressed to catheterize a woman suffering from a distended bladder, not having his catheter with him and being at some distance from his office. He took the crooked glass tube out of the baby's feeding-bottle and drew the water with perfect ease. Since that time he had more or less constantly used glass catheters which he had had constructed for the purpose, and he placed far more confidence in the glass than in the metal catheters. The manifest requirements of a good catheter are that it should be easy to introduce, draw the water quickly and be easily cleansed afterwards. The first two requirements are readily answered by any material of which catheters are commonly made. In the last lies the difficulty. It is impossible to be sure

that the inside of the catheter is clean. He has hitherto directed his nurses in his hospital, where the catheter is in constant use, to keep them, when out of use, in boiling water. He is now using glass catheters, constructed like those he exhibited. They are very cheap, safe (never breaking when in use), and cleansed with ease and certainty. In a hospital a number can be kept standing in a jar containing a disinfecting solution. The device of catheterizing with a glass tube is so simple that he was sure many present or elsewhere must have resorted to it long before this. He was also not surprised this summer when he found well made glass catheters for sale at the instrument makers in Berlin. He presented two patterns, which were sold by Gemrig at 25 cts. each.

DR. KELLY also read a paper on the distribution of hairs on the female genitals, to which he gave the title of the *Female Escutcheon*, pointing out the characteristic differences between the male and female types, as well as the development of the *escutcheon* at puberty, its persistence throughout the period of sexual activity, and its disappearance in old age. Dr. Kelly also drew certain conclusions as to the value of the *escutcheon* in cases of retarded development and doubtful sex.

DR. T. M. DRYSDALE remarked that he was positive that after death or before the sex could not be told by the distribution of the pubic hairs. He had seen the two types, that of man and that of woman, run so nearly together that no reliance whatever could be put on this.

DR. WM. GOODELL stated that Caspar, in his "Forensic Medicine," had referred to the different distribution of the pubic hair in the male from that of the female, as a means of diagnosing the sex in decomposed bodies. Dr. G. did not know what rôle the pubic hair played in the economy. It certainly cannot serve as a pad, because in Mohammedan nations the genitalia of both sexes are scrupulously depilated.

DR. SHOEMAKER said a reference to this subject may be found in the "American System of Gynecology." Dr. Kelly does not "regard this as an absolute rule." He has seen the hair extend to the umbilicus in the female as in the male, but has frequently noticed some of the points to which he has called attention. He is correct in regard to the general type.

DR. STEWART said the rule among the Indians is to have the hair extracted and not shaved. Four years ago, while traveling in the West, he was shown some photographs of nude Indian women and had inquired why there was no exhibition of pubic hairs, and was told that they always had them extracted. He thought the use of the hair was for the protection of the vulva, just as the eyebrows and lashes were for the protection of the eye from perspiration, etc.

DR. KELLY was glad that the discussion had brought out several interesting points in natural

history and in anthropology. In the Eastern countries, where it is a disgrace for a woman to have hair on her genitals, they have a saying of reproach, "thou son of a woman with hair on her parts." The male type is very different from the female type. It is rare to find in the female more than a few scattering hairs run up to the umbilicus. He called attention to the subject as a complete picture. Dr. Cox, in the last number of the *American System of Gynecology*, says that in examining 600 or 700 women in Vienna, he found only six or seven in which the hair tended to go towards the umbilicus, which were rather of the male type. This is an interesting and important fact.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*N. Y. Academy of Medicine—Acute Traumatic Tetanus—Cerebral Syphilis—New Hospitals—Extra-uterine Fœtus Delivered through the Rectum.*

At the December meeting of the Section on Practice of the Academy of Medicine Dr. J. C. Minor presented a valuable contribution on the treatment of acute traumatic tetanus. It was highly philosophical in spirit, and it seems reasonable to suppose that if the principles on which it was based could be carried out generally the present frightful mortality from this disease would be materially lessened.

He assumed at the outset that the disease was the manifestation of a poison due to the tetanus germ and produced by the formation of ptomaines as a sequence of its germ origin. The discoveries of Nicolaier, in 1884, and the subsequent investigations of Carle, Rosenbach, Shakespeare, Brieger, and others, had demonstrated, he said, that tetanus is a blood disease, infectious, inoculable, and having its origin in a bacillus, and that from germ cultures at least three poisonous alkaloids could be separated, viz.: *tetanine*, *tetanotoxine* and *spasmodoxine*. We had, therefore, to deal with a toxic condition. As to the prevention of the disease, the fact that a high temperature destroys the tetanus germ pointed to a possible local prophylaxis in the primary dressing of wounds.

As had been well said, he continued, the healthy working of a nervous centre required two qualities which were equally necessary, viz.: a power to act when called into play, and a power of remaining at rest. In tetanus the latter was lost, inaction becoming impossible because excitation was constant. Even when the tonic contractions diminished in force nervous energy accumulated during the remission, to be discharged later on as a paroxysm of increased tension or spasm. The

disease had a duration, in average cases, of three or four weeks. There seemed to be a definite limit to the production of toxic material, and the disease, having run its course, terminated in recovery under certain conditions. That these conditions were not often fulfilled, however, was shown by the mortality, which, according to Gowers, was nearly 90 per cent., a rate which afforded sufficient warrant for better and more systematic methods of treatment. The fact that the disease was self-limited should encourage the hope of success, provided the patient could be protected against its force for a definite period, and the mortality lists showed that this period consisted of the first and second weeks of the disease, the acute stage of tetanus. Recovery, therefore, depended mainly on the treatment during this time.

He admitted that we could neither eliminate or destroy the poison of tetanus, and that the disease once started was beyond the reach of direct methods of antagonism. But when, he said, we consider the limitation of the disease and the fact that its activity was expended upon the cord and medulla, we are led to the inference that if we could so act upon the central nerves that the force of the disease would be spent upon a benumbed tissue, if we could so modify the functions of the cord as to materially diminish its reflex excitability until the nerve storm had passed, we could accomplish the most essential end of treatment. The problem before us was, therefore, how to put the cord "in splints" physiologically, to do this in the shortest possible time, and to maintain this condition of modified function at least two weeks.

He did not believe it possible, except by profound anæsthesia, to obtain complete relaxation of all the muscles in the first period of an acute attack of tetanus without incurring as much danger from the remedies employed as from the disease itself. The object of treatment was not to abolish the manifestations of the disease, but to control them to such a degree as to maintain a relatively safe condition long enough for the disease to expend itself. The effect of the disease upon the muscular system was the main point of clinical significance. Beginning with mere stiffness of the jaws and neck, the muscular tension increased and subsequently involved the muscles of the abdomen and chest. At times a sudden increase in the degree of tension occurred as a paroxysm or convulsive spasm, affecting the whole muscular system, producing episthotonos or other distortions, and threatening death by asphyxia from tonic contraction of the respiratory muscles.

It was to be noted, then, that we had a period of remission and a period of exacerbation, with a certain rhythmic rise and fall of nervous excitability. The condition during the first stage of the disease was one of constantly increasing vio-

lence; the spasms growing more and more severe, and the remissions shorter or less pronounced, until in from one to two weeks the disease culminated in a spasm of extreme violence which usually ended the case. The termination was not always fatal, however, as this might be the critical discharge, from which the patient, if he survived, would pass at once into the declining stage of the disease. Other causes of death might occur in the form of simple exhaustion, cardiac failure, or accidental complications.

It appeared, therefore, that if we could eliminate these convulsive paroxysms from the disease it would cease to yield such an extreme mortality, and the aim of our treatment, consequently, should be to prolong the remissions and modify or absolutely prevent the paroxysms. Now it was a well-known fact, Dr. Minor went on to say, that when the functions of the nervous system are under the control of any agent that modifies them, they are not easily affected by any other agent, and in tetanus we had a toxæmia of which tetanine was the genetic agent. This poison produced a marked influence on the functions of the cord, increasing its reflex excitability; and if we attempted to counteract this effect by agents which depress the functional activity of the cord, we should find that ordinary doses produced little or no result, because the nervous system was already under the control of a powerful modifier of function. Hence toxic doses would be required to produce therapeutic effects. On the other hand, if we once obtained control of the nervous system, and maintained that advantage by using our remedies in doses sufficient for the purpose, neither tetanine nor any other agent would easily regain control of the functions thus modified.

Assuming that all remedies useful in the treatment of tetanus must possess the power of depressing the functional activity of the cord, the choice of remedies, he thought, was not of more importance than the method of using them; so that a poor remedy well used was better than the best of remedies inefficiently given. The main object being to intoxicate the cord, so as to depress its normal excitability, it was evident that quite a wide range of drugs was at our disposal. The ones to which he gave the preference were calabar bean, chloral and the bromides, with an occasional resort to chloroform. Chloroform, calabar bean and chloral are the most efficient in the first period of the disease, while the bromides, and also the salicylates, came into play during the declining stage.

In the first stage he considered that there were three indications to be fulfilled: 1. to lessen muscular rigidity; 2. to prevent convulsive spasms; and 3. to carry the patient through the crisis. The three remedies named were not equally adapted to the purpose in view. Chloroform, for instance, had only a limited use, but within its

range of adaptation its action was unrivalled. It was to be employed in those case of rapid development, occurring soon after an injury, in which the violence and frequent recurrence of the paroxysms threatened an early and fatal termination. Again, it might be necessary in cases of slower development in which the disease, either from neglect or inefficient treatment, had been permitted to get under full headway. Its action was sure and rapid, and, carried to the degree of narcosis, it gave us complete control of the functions of the cord, abolished reflex excitability, and held the disease in check. This point attained, Dr. Minor advised that anæsthesia should be continued long enough to transfer the control of the functions of the cord to some other and safer agent. During anæsthesia, then, we might administer chloral, calabar bean, or any remedy suitable for hypodermic or rectal use, and, after waiting twenty or thirty minutes for absorption to take place, suspend the chloroform.

Of the two agents mentioned he considered calabar bean preferable, because its action is confined to the same field in which the tetanus poison operates, and is the nearest approach to a physiological antidote to tetanine at our command. The variable character of the drug as usually found rendered it very unreliable in practice, however, and as a rule it was better to use the salicylate of eserine than the solid extract of calabar bean. Chloral, while not so good a remedy or so perfect an antagonist to tetanine, was a better drug and practically of greater service. If calabar bean was used, chloral would be needed to supplement its action as the disease approached its climax; while if chloral was employed the bromides would serve in the same relation. In regard to dosage, he thought we should start with the maximum quantity, and be governed as to its subsequent increase by the effect observed upon the muscles. There was, in fact, no such thing as a perfectly safe method of treating the disease successfully. Verneuil advised doses of not less than 3j of chloral. He considered it necessary to keep the patient in a kind of continuous coma for at least fifteen days, and then gradually reduce the amount of chloral daily. Twice, however, Dr. Minor said he had succeeded in carrying cases to recovery with much smaller doses than this, and he did not think that a semi-coma was the best condition for the patient to be in. Smaller doses, he believed, were equally effective if combined with or supplemented by other remedies; and if about the end of the first week the bromides were given in addition, we should increase the action of the remedy without augmenting its danger.

The use of calabar bean required far more care and attention to detail, and he recommended that the initial dose should not be less than half a pound of the solid extract. In its administration the object was to regulate the doses in such a way

as to anticipate the condition of muscular tension, and thus prevent the recurrence of spasms. Under its use the periodicity naturally incident to the disease became more marked, because the remedy contributed to a marked remission. Two grains might be sufficient to secure this relief for two hours at a time during the first week of the disease; but 3 or 4 grains were usually required before the end of the second week, and the increasing violence of the disease would bring these doses closer together. As the crisis approached, the patient was in great danger from both the disease and the remedy, as both were cumulative in their toxic action; and at this stage both these dangers would be materially lessened by bringing chloral into use and rapidly diminishing the amount of calabar bean.

During the period of increase of the disease, no matter what remedy was employed, he believed it was necessary to increase the dose in proportion to the work it had to do, and that as the crisis came on we had to choose between the danger of an excessive dose of our remedy and an excessive dose of tetanine. The first was to be preferred, however, because if toxic symptoms appeared we might antidote them, with the probability that the disease had spent its force at this point. To pass the crisis successfully signified recovery.

Having referred to the toxic symptoms of calabar bean, and their treatment by atropia and morphia, Dr. Minor said in conclusion that to use our remedies timidly was to permit the disease to kill the patient; to use them recklessly was to perform that office ourselves. The responsibilities assumed by the physician in the treatment of traumatic tetanus were precisely the same as those belonging to the surgeon who undertook a difficult and dangerous capital operation. As to the general management of these cases, rest and nourishment were so important in their relation to the successful issue of treatment that, no matter how careful and thorough the therapeutic methods might be, they would certainly fail unless the strength of the patient was properly supported and his nervous system protected against undue excitement.

On the same evening Dr. E. D. Fisher read a paper on "Cerebral Syphilis," which was mainly devoted to the pathological condition of the blood-vessels and the clinical manifestations arising therefrom. In the course of it he exhibited a drawing of Rumpf's representing syphilitic arteritis, in which the narrowing of the lumen was very clearly delineated, and which corresponded very closely to a microscopical section of the basilar artery in a case of Dr. Fisher's.

Two new hospitals have recently been opened here with public exercises. The first, St. Joseph's, a Roman Catholic institution for incurables, is located in the upper part of the city on the East Side, and the second, the Montefiore Home for Chronic

Invalids, erected by the Hebrews in memory of Sir Moses Montefiore, is up town on the West Side. At the dedication of the latter, which is a very large and handsome building beautifully situated near the Hudson River, the principal address was made by the Hon. Carl Schurz, and instrumental and vocal music was furnished by the inmates of the neighboring Hebrew Orphan Asylum.

A fine new hospital, the Arnot-Ogden memorial, has also been inaugurated at Elmira. On this occasion a letter was read from Mrs. Arnot-Ogden, who erected the building, formally transferring the institution to the board of trustees; and Dr. Wm. C. Wey accepted the trust on behalf of the board. The cost to Mrs. Ogden was \$75,000, and in addition the hospital has been endowed to the extent of \$50,000 by other members of the Arnot family. The consulting physicians will be Drs. Wm. C. Wey, T. L. Squire and C. W. M. Brown, and the attending physicians Drs. Henry Flood, H. De V. Pratt, Jr., C. L. Squire, and H. D. Wey.

The Board of Estimate and Apportionment have decided to increase the appropriation from the city for the maintenance and development of the farm for the insane on Long Island which was started in 1887, and has thus far proved a very successful experiment. It is designed to receive the overflow from the crowded asylums on Ward's and Blackwell's Islands, and the property embraces a thousand acres of land, which will all eventually be under cultivation by the patients. At present there are accommodations in the model buildings which have been erected for 300, who are divided up into separate groups or colonies of 100, and more colonies will be added from time to time as circumstances admit.

At the last meeting of the Section on Obstetrics and Gynecology of the Academy of Medicine, Dr. James P. Tuttle read the report of an apparently unique case; it being one of extra-uterine pregnancy in which the foetus was delivered intact per rectum. It was of four months, and was exhibited to the Section. The mother died of hæmorrhage and exhaustion.

P. B. P.

Medical gentlemen writing to the Editor of THE JOURNAL will please conform to the rule requiring MS. to be written on one side of the paper, to take pains to write the names of persons and places legibly, and to send their own names as a guarantee of good faith.

#### A Case of Abnormal Sexual Development in a Male.

An article on "Teratology" in THE JOURNAL of October 20, by Dr. Joseph Jones, of Louisiana, describes the case of John H. Allen, whose sexual organs were so abnormally developed as to make it uncertain whether testicles were present at all. Some of the peculiarities there mentioned are present in the following case, and taken together the two are interesting.

The case is that of a Scandinavian, who, in the



early part of 1887, attempted to enlist in the U. S. Navy as a seaman. When he undressed for the physical examination, which the writer conducted, the following facts were noted: He was apparently 24 years old, 5 feet 8 inches in height, weighed about 160 pounds, with a chest measurement of about 37 inches, and was of blonde type and in apparent perfect health. Though he possessed considerable strength, his limbs were not muscular in appearance but were excessively feminine in shape, and his hips were broader than his chest. His skin was fair and devoid of hair, except a small amount on the pubis, and there was no appearance whatever of beard. His hands were large and coarse from his occupation, that of a sailor, which he had then followed for several years. The accumulation of fat on the chest, gave the appearance of virgin mammæ, though the nipples were very small and surrounded by a very small dark areola. The voice was pleasant and though not what might be termed feminine, it was not what a man of his vigor would naturally possess. He seemed retiring in disposition though not bashful, and seemed possessed of but little energy. The penis was well-formed, about  $1\frac{1}{2}$  inches long, and  $\frac{3}{8}$  inch in diameter, and the testicles were not quite as large as average almonds. The size of the erected penis is not known, but he said he had had sexual relations with women a few times in his life. Viewed from the rear one would have supposed him to be a female so perfectly feminine was his entire figure.

Whenever there is an arrest of development of the sexual organs, the person always seems to have characteristics of the opposite sex, in other parts of the body, in direct ratio to the amount of impairment of the sexual apparatus. This case in which the impairment is not nearly so marked as in the one before mentioned, shows this fact, and it may be possible to find cases forming a continuous series from such as this case with but little impairment, to those rare cases in which the characteristics of each sex are equally prominent and the sexual organs so abnormally developed as to completely hide the sex, or even to true hermaphroditism. The abnormality is not merely an arrest of the development of the sexual organs, for the above cases have many female characteristics. It must start in the embryo when the differentiation of sex begins; the great majority take the course either to become perfect males or females, but a certain number take some intermediate course developing into one sex but obtaining more or less of the characteristics of the opposite sex, and a few take the middle course, becoming true hermaphrodites with the characteristics of each sex decidedly marked. Cases have been recorded of females who have thus developed many of the male qualities, and it would be interesting to know whether the number is not really larger and whether those masculine women who

seem so prone to seek work in positions which men should occupy, and so repugnant to remaining at the fireside, do not really belong to this class who have not attained perfect female development, but owe their peculiarities to the false start taken by the embryo at the eighth week of intra-uterine life.

CHAS. E. WOODRUFF,  
Asst-Surg. U. S. A.

Fort Mackinac, Mich., Dec. 26, 1888.

### The Medical College of Virginia.

[The recent Editor of THE JOURNAL has not now, and never has had the slightest disposition to do injustice to the Medical College of Virginia. All that he has permitted to be said editorially has been founded on the published statistics of the State Board of Examiners and the published statements of what took place before the Legislature or its Committees. Whether 8 rejections out of 57 is  $12\frac{1}{4}$  or 14 per cent., or whether 8 rejections out of 57 is a better showing than 1 rejection out of 33, any of our readers can figure for themselves. Hence we cheerfully close the subject by giving the following letter from the Faculty.

N. S. D.]

*Mr. Editor:*—In the number of THE JOURNAL for December 15, 1888, in the editorial on the "Medical College of Virginia," is a statement referring to Dr. Geo. Ben. Johnston and myself, namely, that "the action of the students was substantially, though unofficially, endorsed by the members of the Faculty (except Drs. John Upshur and Geo. Ben. Johnston)." The night preceding the meeting of the Legislative Committee, at a formal meeting of the Faculty, the Dean was instructed to appear before this Committee and *re-affirm* the position the Faculty had *always* taken in favor of an Examining Board and *in favor* of the *examination* of the *graduates* of the Medical College of Virginia.

Dr. Cullen was forestalled by a member of the Faculty, earlier in attendance and openly in sympathy with the students, and who, in the face of the action of his colleagues the previous night, and unauthorized by them, by the position he assumed before the Committee, placed the College in an equivocal position. Dr. Cullen, before having an opportunity to carry out the instructions of the Faculty, was called away, and though I was not present, I am informed by Dr. Cullen that the statement made by Dr. Johnston to the Committee, enunciating the position your editorial says we occupied, was made at his request, and defined the position not only of Dr. Johnston and myself, but of the Faculty. The minutes of the Faculty sustain the consistency of the Faculty on this question. Dr. Cullen's letter emphatically states, that when applied to by the students for aid, it was positively refused.

The point made in the percentage of failures



before the Board, was not so much a matter of figures, as that the showing for the graduates of the Medical College of Virginia was far better than for any other school. The accurate percentage of rejections was  $12\frac{1}{4}$ —and the proportion for the other schools 25 to 33 per cent. The table published failed to state that *last spring the Board licensed three young men as competent to practice medicine, who had been rejected by the Faculty of the College.* We are not afraid to point to the ranks of the Army, Navy, and Marine Medical Service, for numbers of our Alumni, who have given satisfactory proof to the unprejudiced, that the *work done by the Medical College of Virginia is not bad.*

If Dr. Cullen misunderstood the charges made by THE JOURNAL, I assert that I have read them carefully and do understand them, and I emphatically deny every statement, except so far as the students are referred to, supported and endorsed by *one* member of the Faculty in his individual capacity, and I challenge the proofs that will convince an unprejudiced profession. You have been misinformed Mr. Editor, we only desire that you should do us justice, and certainly the organ of the American Medical Association has a higher mission, than upon such flimsy evidence, to pursue a medical school, with a stainless record of half a century, in the spirit manifested by the recent articles which have appeared in its columns.

The weal of the profession and the admission to its ranks of men thoroughly prepared, is as earnestly desired by the Faculty of the Medical College of Virginia as any other men in the profession, and we stand ready to-day to sustain the Board in the prerequisite of a *diploma, English examination,* and lengthened term of study. Respectfully, J. N. UPSHUR, M.D., Prof. Mat. Medica, etc., and Secretary of the Faculty, Medical College of Virginia.  
206 E. Grace St., Richmond, Va., Dec. 21, 1888.

#### Infanticide.

*Dear Sir:*—The members of the medical profession must have felt embarrassed and humiliated at the exposure of abortionists by the *Chicago Times.* We heartily endorse the remarks of the Editor of THE JOURNAL on that subject. The profession cannot be consistent with the sentiments of this editorial and permit one of these men, or any known infanticidist, to remain within any medical society recognized by the American Medical Association. Nor should any member of the profession recognize or consult with one of them.

Permit your correspondent to say that our periodical literature has said but little, much too little, on this subject, to impress their readers with the enormity of this crime. We regret to express

any opinion that will do injustice to any journal, but the truth of our convictions is, that some articles have been published by contributors to medical journals, that have come to my reading, that were not up to the standard of the opinion expressed by the Editor of THE JOURNAL. Correspondence has been published giving "The Best Mode of Producing Abortion," and one that I can recall in which the profession at large was asked to give a safe plan for this process. The public mind does not comprehend the great danger there is in producing this wrong act, nor is popular sentiment far enough advanced to comprehend the fact that it is murder to produce it. Every physician of much experience has been consulted on the propriety and even the necessity of doing this thing. Both fathers and mothers have been known to go to their physician with an argument to sustain their position, like the following: "Doctor, my wife is too weak to bear a family;" and another confronts you with the plea that he is poor and not able to raise a large family, that he has enough and as many children as he can raise, that it would be better and nearer right to prevent the offspring from coming into the world alive than to let it be born to suffer and cause others to suffer.

This error and the long list of wrong opinions on this subject, can only be corrected by medical gentlemen, in their professional intercourse with their patrons. Educate the people to know the wrong and the crime, as well as the danger attending abortion, and but few applications will be made to the abortionist, and there will be no demand for his wicked service.

J. W. HERVEY, M.D.

Indianapolis, Jan. 3, 1889.

#### Medical Jurisprudence.

*Dear Sir:*—The following case will probably interest your readers: One who holds himself out as a healer of diseases must, no matter what particular school or system he practices, be held to the duty of reasonable skill in the light of the present state of medical science. So held in a case of alleged clairvoyance. *Nelson vs. Harrington*, S. Ct. of Wisconsin, Nov. 8, 1888; 40. *Northwestern Reporter*, p. 228.

Respectfully, M. D. EWELL.

Union College of Law, law department of the Northwestern University, Chicago, Jan. 3, 1889.

PERSONAL.—Dr. E. A. Neeley, of Memphis, has retired from the editorial staff of that sterling journal, the *Memphis Medical Monthly.*

THE CODE OF ETHICS.—At the recent meeting of the Tri-State Medical Association, our Code was sustained by a unanimous vote.

## BOOK NOTICES.

THE WATERS OF PLOMBIÈRES (Vosges). By DR. BOTTENTUIT, Medecin aux Eau de Plombières, Member de la Société Clinique de Paris, Chevalier de la legion d'honneur. London: J. & A. Churchill.

This work is divided in three parts, the most important is certainly that in which the description of the sources of Plombières, their analysis and their temperature is given. The description of the physical and chemical properties of the waters, some of which are very hot, and some belong to the class of the indifferent waters, such as Burton, Wildbad or Ieplitz.

A chapter is devoted to the study of the baths. Their action depends on their duration, their temperature, and on the douches, which may be applied in different manners, and produce various effects according to their mode of application, on the etuves and massages. Their use will be found very successful in many cases; their action requires careful watching.

The chapter of the indications and contra-indications of the waters of Plombières is most important to read. M. Bottentuit recapitulates in a few pages the notions which enable the physician to judge in which cases the waters of Plombières may be valuable to the patients. He insists upon the sedative and calming action of the waters of Plombières, and on the benefit derived from their use, in the cases of nervous erethisma and in affections where painful form prevails. The waters can be used, however, not merely so as to obtain a sedative action, but so as to ensure at the same time a derivative, a tonic or a stimulating one. It is the carefully combined use of these different methods which produces the most satisfactory results.

M. Bottentuit indicates the action of the waters of Plombières in the diseases of the intestinal tube (flatulent dyspepsia, stomachal vertigo, gastralgia, diseases of the intestines, chronic diarrhœa) in the troubles of the womb (metritis, amenorrhœa, dysmenorrhœa, sterility). At last, in gout and rheumatism, we may say, that since the construction of the "Nouveaux Thermes" Plombières possesses an establishment fitted with the best appliances, to be found anywhere.

Patients who cannot bear the douches or the etuves at other stations can, thanks to a judicious use of the baths, support them, and will reap great advantage from them. In such cases the douches and baths are given simultaneously, and thus the sedative effect of the bath diminishes the exciting action of the douche, without destroying its stimulating qualities.

Rheumatism, as is well-known, often attacks

the viscera. Its commonest manifestations are those of gastralgia and enteralgia; often it assumes other forms, less frequent perhaps, but more difficult to trace.

In all such cases, the waters of Plombières have a happy effect, but more than that, they combat, not only the effects of the rheumatic diathesis, but the diathesis itself, which is the origin of all these troubles. The reader will be deeply interested by the account of the origin of this little town, by the changes and catastrophes undergone by Plombières, from the time the Romans settled there, to the annexion of Lorraine to France, and by the numerous works carried out during these last twenty years.

Dr. Bottentuit, in his handy little guide, gives ample information about the town of Plombières and the adjacent country, to which many pleasant excursions may be made. There is a Casino, and there is a fair amount of amusement and recreation to be had. The book is illustrated by many views of Plombières itself and of its vicinity. The Vosges country is well worth exploring as an after-cure to the course at Plombières.

P. B.

WASHINGTON'S RULES OF CIVILITY AND DECENT BEHAVIOR IN COMPANY AND CONVERSATION. A paper found among the early writings of George Washington. Copied from the original with literal exactness, and edited with notes by J. M. TONER, M.D. Washington, D. C.: W. H. Morrison. Price, 50 cents.

Among the entertaining *brochures* of the year just closed, is Dr. Toner's edition of "Washington's Rules of Civility." Dr. Toner says: "The unceasing desire of the public to learn more and more of the life and character of General Washington, induces me to publish entire, and for the first time, with literal exactness, his 'Rules of Civility and Decent Behavior in Company and Conversation.'

They were written by him at about the age of thirteen, and with the exception of some school exercises, are the earliest of his productions, in the order of time, which have been preserved. It is proper, too, that their publication should precede that of his Diaries and Journals, taken by Dr. Toner from the original MS. and arranged in chronological order with notes, which are now nearly ready for the press.

The first of the series Washington himself entitles "A Journal of my Journey Over the Mountains, begun 11th March, 1747-8. It will be seen from this date that he was but sixteen years and one month old."

Dr. Toner's patient researches into the musty records of the past are always productive of pleasure to those who read an account of them, and in this little volume he has given a glimpse of the

Father of his Country from a new and different standpoint.

The notes by Dr. Toner have a historical value apart from their general interest.

## MISCELLANY.

**ANTI-RABIC INOCULATION.**—In recent numbers of the *Journal d'Hygiene*, October 18 and 25, 1888, Dr. Prosper de Pietra Santa discusses the present state of the question of anti-rabic inoculation. He tells us in a letter to Dr. La Torre that he has gone through the literature of the subject since 1879, and with impartiality, but he has been forced by the evidence to make part of the crowd of *obscure blasphemers*, and he has consoled himself with the thought, "*Amicus Plato, amicus Socrates, majis amica veritas.*" From the arguments drawn from patriotism on the one hand, and the glorification of French science on the other, he believed with Pasteur that *la patrie de la science embrasse l'humanite tout entiere*. In giving the views of von Frish, Jules Guerin, and Peter, he did not insist on them so much as on those of H. Bouley, B. W. Richardson, and Bouchard, who, whilst professing a great regard for the illustrious chemist, yet have been compelled by the facts to give the experiments their true interpretation. Dr. Richardson (London) wrote: "*The empirical method of Pasteur, with only a trace of genius, is wanting in scientific control.*" Bouchard, at the Congress at Nancy, spoke with good sense, logic and wisdom, on the method. "We cannot conceal that there still exist doubts on the mode of action of the vaccine of rabies. This inoculation does not present any analogy with other virus-vaccines, as for chicken- and small-pox. In these we have to deal with microbes known, cultivated, and rendered vaccines by laboratory manipulations. They have the same vital quality even in the least quantity. They produce a malady which confers immunity from the first. With the method of Pasteur there is nothing similar—no attenuation of virus, no known microbe, no malady. We are, in fact, in *empiricism*." The opinions of Bouley are quoted, favorable to many parts of Pasteur's work, but Bouley proposed a number of tests, which have not been carried out, so far as Dr. De Santa can learn, or if so, they have not escaped the doors of the Pasteur laboratory. These questions should be answered, as they were so framed as to throw light on many important points in the controversy. They have been shelved on such pleas as want of leisure. Colin of Alfort's proposals appear to have met with the same fate, though the means of the Institute have been ample for their solution. Dr. De Santa passes from opinions to figures. He tells us that the mean mortality from rabies has been questioned. It is not known accurately. Brouardel adopted the figure of thirty per annum, a figure previously adopted by Tardieu. But when the Institute of Pasteur revealed *hundreds* of cases per annum, the figure *thirty* was necessarily said to be too low. Brouardel subsequently said: "They only knew of less than half the deaths." One factor in the problem being wanting, it was illogical to state that the deaths in France had diminished. They had returns for 1887 of the Department of the Seine, collected by Dujardin-Beaumetz, of 350 bitten persons; 306 followed the treatment, with two deaths; forty-four did not follow it, with seven deaths. At first sight these figures were convincing, but in the 306 no account is taken of the treatment received before application at the laboratory, or of the proportion who escape injury, fixed by M. Leblanc at one in six, by the London Commissioners at one in five. In place of M. Grancher (March, 1886) saying, "Out of 350 persons we have had 350 successes," it would have been more just to delete from that propor-

tion (one in six) who would have escaped without the anti-rabic treatment. The figures worked by Dr. De Santa stand as follows: For the mortality of seven in forty-four the formula is:

$$7 : 44 :: 1 : x = \frac{44 \times 1}{7} = 6.28.$$

This gives a mortality of 6.28. Taking some of Pasteur's large statistics, he reduces them to another formula. In July, 1887, M. Pasteur had treated 3,339 persons—2,728 bitten by rabid (?) animals, 611 by suspected animals. Out of this number there had been thirty-eight deaths, in the proportion of 1.13 per 100, taking all the deaths. Deducting the proportion of one in six, who would have escaped in all probability, we have the formula:

$$100 : 1.13 :: 5 : x = 20.60.$$

The figure 20.60 per cent. really represents the mortality. These statistics, which Dr. De Santa gives, show how figures may be manipulated. He continues his letter by referring to the opinions of Vulpian and Charcot. Vulpian said at the Academy: "Rabies, that terrible malady, has at last found its remedy." Charcot said: "M. Pasteur can walk with head on high, and still pursue the accomplishment of his glorious task, without being turned aside a single instant by the clamors of contradiction or the insidious murmurs of ———." Dr. De Santa gave the reverse of the medal in the criticisms of MM. J. Guerin, Fauvel, and Peter. M. Peter stated that since the discovery of the remedy there have been more cases of rabies, that Pasteur was not the successor of Jenner, and that the method was to be condemned: 1. On scientific grounds, as it was a strange abuse of language to give the name of vaccination to such inoculations. 2. That the system was *empirical*, accentuated by contradictions—contradictions shown by the fact that a microbe was assumed which did not exist, an empiricism, by the cultivation not of the microbe but of rabid spinal cords, and in making them pass from one living organism into another living organism—an empiricism still, when he passed in his inoculations from the organism of the rabbit to that of the dog—empiricism more audacious still when he passed from his experiments on the organism of the dog, before a bite, to experiments on the organism of man after a bite, from an enraged animal.

M. Pasteur cannot complain of criticism when he himself had the audacity to say of M. Peter, one of the first clinicians in France, that he was a person clinically and experimentally incompetent to judge. This impatience of criticism is very remarkable in M. Pasteur's career. All who accept M. Pasteur's views are, of course, wholly competent, even though they have the most profound ignorance of the literature of rabies. Dr. de Santa finishes his report by alluding to the report of the English commission, which did not support the formation of a rabic institution in England, but demanded the application of rigorous police measures.

M. de Santa calls to mind M. Pasteur's felicitation of the action of the Prefect of Police of Paris in his crusade against wandering dogs. He says on this point: "It is singular to see the destruction *per fas et nefas* of the canine race praised by the *savant* who has discovered the means for curing rabies." M. de Santa points out another disappointment resulting from a reply of M. Pasteur to furnish the indications, etc., on the first symptoms of rabies in dogs and cats. M. Pasteur replied: "It was not possible to define, in an absolute manner, the characteristic symptoms of rabies, as even experts (veterinarians) might sometimes make an erroneous diagnosis." The reply is a dangerous one, because it can be applied to the diagnosis of the condition of the dogs which furnished M. Pasteur himself so many patients. M. Pasteur has, in his time, not been unsparing in his criticisms of theories with which he could not agree, and he should be the last to appeal *ad misericordiam*. He is amply rewarded by

the manner in which the Institute has been supported by the Emperor of Russia, the Sultan, and the Republic of France. The brilliant ceremony which took place at the opening of the new Institute in the Rue Dutau should compensate him for any criticism he has been subjected to. The ceremony was undoubtedly an imposing one, even though wanting in the support of the *savants* of Germany, Austria, Italy, Belgium, etc. The objects of the Institute, the study of virulent maladies are admirable. We cannot overlook the too great prominence given to rabic inoculation, so much so that Dr. Henri Huchard, the famous French therapist, has called the new building the "Palace of Rabies."

The address of M. Grancher at the opening of the Palace of Rabies contains a repetition of the fallacy that the mortality is 1½ per cent., which assumes that all who are bitten are in danger of contracting hydrophobia. The mortality in France remains unaffected. The mean annual of thirty deaths, established by statistics from 1850 to 1885, is still kept up. The following table, taken from the *Journal de Medecine de Paris*, November 20, gives the number of deaths after the Pasteur treatment during the year 1888:

NOMS.	Animal et date de la morsure.	Date du traitement.	Date de la mort.
1 N., enfant de 4 ans.	Chien 6 déc. '87	12 décembre '87	22 janv. 1888
2 Sidi ben Israel . . .	Chien . . . . .	Janvier 1888.	18 mars.
3 N., femme de 52 ans . .	— 23 janv. . . .	29 janvier . . .	17 février.
4 Marinot . . . . .	— 15 févr. . . .	15 février . . .	1 avril.
5 S., âgé de 54 ans. . . .	— 9 nov. . . . .	11 novem. 1887.	3 avril.
6 Cotte, 28 ans. . . . .	— . . . . .	6 mars 1888 . .	12 avril.
7 N., enfant de 6 ans . .	— avril . . . . .	5 avril . . . . .	2 mai.
8 Avray, 11 ans. . . . .	— 12 avril . . . .	17 avril . . . . .	29 mai.
9 Olin. . . . .	— 23 avril . . . .	26 avril . . . . .	17 juin.
10 Poulet, 29 ans. . . . .	— 6 déc. '87	8 décembre '87	12 juillet '88.
11 Bertin, 18 mois . . . .	— 15 mai . . . . .	17 mai . . . . .	20 juin.
12 Villemain, 31 mois . .	— 9 mai . . . . .	14 mai . . . . .	23 juin.
13 Labeaume, 37 ans. . . .	Chat 29 mai . . .	30 mai . . . . .	6 juillet.
14 N., 28 ans. . . . .	Chien 10 déc. '87	12 décembre '87	15 juillet '88.
15 Ducos, 28 ans. . . . .	Chat 16 juin . . .	20 juin . . . . .	18 juillet.
16 Mesnil, 44 ans. . . . .	Chat 25 mars . . .	26 mars . . . . .	20 juillet.
17 Sarazin, 44 ans. . . . .	Chien 1 juillet. .	4 juillet . . . . .	4 août.
18 Guers, 27 ans. . . . .	— 13 juillet. . . .	16 juillet . . . .	8 août.
19 N. (cité par Dr. Le- vraud) . . . . .	— 15 juillet. . . .	16 juillet . . . .	30 août.
20 Sinardet, 26 ans. . . .	— 26 avr. '88	3 mai 1886 . . .	28 juillet '88.
21 Cousinier . . . . .	— 12 sept. '86	12 septemb. '88	8 oct. 1888.

These are the deaths for nine months. If we add to this the mortality of persons who did not seek M. Pasteur's aid, the figure thirty, the mean mortality, would be reached.—*The Provincial Med. Journal*, Dec. 1, 1888.

QUARANTINE CONFERENCE CALLED.—The Legislature of Alabama adopted at its recent session a joint resolution calling a conference on quarantine regulations to meet in Montgomery March 5. The Governor has forwarded letters to the Governors of Georgia, Texas, Louisiana, Mississippi, Florida, South Carolina, North Carolina, Tennessee, Kentucky and Illinois, requesting them to appoint delegates to the conference.

#### PAMPHLETS RECEIVED.

Marcy, Henry O., M.D., Boston, Mass. *The Climate of the Southern Appalachians*. Reprint from Tran. Ninth Int. Med. Cong. 1888.

*Ibid.* *The Histology and Surgical Treatment of Uterine Myoma*. Reprint from Trans. Ninth Int. Med. Cong. 1888.

Oliver, Charles A., M.D., of Philadelphia. *The Eye of the Adult Imbecile*. Reprint from Trans. Am. Ophthalmological Society. 1887.

Blanc, Henry W., M.D., of New Orleans. *Leprosy in New Orleans*. p. 65. No date.

Theobald, Samuel, M.D. *The Influence which the Discovery of Cocaine has Exerted upon Ophthalmic Surgery*.

Reprint from Trans. Med. and Chirurg. Faculty of Maryland. 1888.

*Ibid.* *Is Astigmatism a Factor in the Causation of Glaucoma?* Reprint from Am. Journal of Ophthalmology, Oct., 1888.

Freire, Domingos, M.D. *Réfutation des recherches sur la Fièvre Jaune faites par M. P. Gibier, à la Havane*. Rio-Janeiro. 1888.

#### LETTERS RECEIVED.

J. M. Toner, M.D., Washington; W. A. Townsend Pub. Co., New York; Edward F. Wells, M.D., Shelbyville, Ind.; Henry T. Byford, M.D., City; J. J. McAchran, M.D., Salt Lake City, Utah; J. H. Smith, M.D., Dallas, Tex.; Commercial Advertiser, New York; Horlick's Food Co., Racine, Wis.; O. J. Fullerton, M.D., Waterloo, Ia.; Carl H. von Ruck, M.D., Asheville, N.C.; J. H. Kellogg, M.D., Battle Creek, Mich.; Trübner & Co., London, Eng.; Clark Cook, M.D., Fowler, Ind.; S. S. Adams, M.D., Washington, D.C.; W. Byford Ryan, M.D., Willow Branch, Ind.; Joseph Eastman, M.D., Indianapolis, Ind.; Drs. Henry A. Martin & Son, Roxbury, Mass.; Wm. B. Atkinson, M.D., Philadelphia, Pa.; E. M. Moore, M.D., Rochester, N. Y.; Leartus Connor, M.D., Detroit, Mich.; L. S. McMurtry, M.D., Danville, Ky.; Samuel N. Nelson, M.D., Boston, Mass.; Le Dr. Bottentuit, Paris, France; Frederick S. Dennis, M.D., New York; John Shradly, M.D., New York; Thos. F. Goode, Buffalo Lithia Springs, Va.; Geo. W. Barr, M.D., Titusville, Pa.; E. Steiger & Co., New York; P. O. Hooper, M.D., Little Rock, Ark.; G. F. Hesler, Tocsin, Ind.; Sharp & Dohme, Baltimore, Md.; Upjohn Pill & Granule Co., Kalamazoo, Mich.; R. W. Gardner, New York; Samuel Wright, Columbia, Pa.; W. R. Allison, M.D., Good Hope, Ill.; J. E. W. Smith, M.D., Waycross, Ga.; Richard H. Day, M.D., Baton Rouge, La.; Alonzo Garcelon, M.D., Lewiston, Me.; J. B. Andrews, M.D., Buffalo, N. Y.; P. B. Porter, M.D., New York; W. Rommelaer, M.D., Bruxelles; E. Cutter, M.D., New York; L. G. Roberts, D.D.S., Eureka Springs, Ark.

*Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from December 29, 1888, to January 4, 1889.*

By direction of the acting Secretary of War, Capt. Fred. C. Ainsworth, Asst. Surgeon, will proceed to New York City, N. Y., and Brooklyn, N. Y., on business connected with the Medical Department. Par. 20, S. O. 302, A. G. O., Washington, December 29, 1888.

*Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Two Weeks Ending December 22, 1888.*

Supervising Surgeon-General John B. Hamilton, granted leave of absence for sixty days. December 20, 1888.

Surgeon P. H. Bailhache, to inspect unserviceable property at New York Marine Hospital. December 17, 1888.

Surgeon Walter Wyman, to proceed to New York, N. Y., and transfer public property. December 15, 1888.

P. A. Surgeon H. R. Carter, granted leave of absence for fifteen days. December 10, 1888.

Asst. Surgeon G. M. Magruder, upon expiration of leave of absence, to proceed to New Orleans, La., for temporary duty. December 21, 1888.

Asst. Surgeon, J. O. Cobb, leave of absence extended ten days. December 14, 1888. To proceed to Evansville, Ind., for temporary duty. December 20, 1888.

Asst. Surgeon J. B. Stoner, when relieved, to proceed to New York, N. Y., for duty. December 13, 1888.

Asst. Surgeon H. D. Geddings, upon expiration of leave of absence, to proceed to New York, N. Y., for temporary duty. December 21, 1888.

#### CORRIGENDA.

In the New York letter published in the last issue of THE JOURNAL, eighteenth line from bottom of second column, page 31, read *exacerbation* for *evacuation*.

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No. 3.

ORIGINAL ARTICLES.

RESULTS IN ELEVEN CASES OF A NEW  
METHOD FOR ARRESTING BLEED-  
ING IN SURGICAL OPERATIONS  
AND CONDITIONS, AND FOR  
THE TREATMENT OF  
ANEURISMS.

*Read in the Section on Surgery and Anatomy at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

BY C. S. MUSCROFT, M.D.,  
OF CINCINNATI, OHIO.

No complication in operative surgery has occupied the mind of the surgeon with so much interest, responsibility and anxiety, as the prevention and arrest of hemorrhage.

It is unnecessary to recapitulate the different methods adopted by the profession from time to time, as there are none in this Section of the Association who are not familiar with them all.

This importance was never so strongly presented to the mind of the author as on the 10th day of August, 1886, when about to perform, for the first time, an amputation at the hip-joint in a patient 58 years old. The literature of the different methods for preventing hemorrhage in this operation was carefully examined, but none promised the security to the patient that could be wished. It is not astonishing that the dread of the patient dying on the operation table from hemorrhage, (an accident which has so often occurred) haunted me for days and nights previous to its performance.

Having on several occasions arrested hemorrhages from small arteries by means of the introduction of a pin under the artery, and compressing it by the figure-of-eight ligature, in the same manner as those applied for the purpose of treating varicose veins of the extremities. From the satisfactory results obtained, it was decided to apply the same treatment to the femoral artery, for the purpose of shutting off the supply of blood at the time of amputation. It was done as follows: A long needle, no pin large enough being at hand, introduced to the inside of the femoral vein, at the distance of half an inch from the sheaths of the combined vessels and nerve.

The distance from the groin an inch and a half. It was directed perpendicular to the front of the thigh, pushed backward until the sheaths containing the femoral vessels were passed, then turning the point under them toward the external side of the femur, then forcing the point to the front through the integuments and skin. The figure-of-eight ligature fastened the needle firmly in its place. Pulsation of the artery below the needle could be distinctly felt before the ligature was tightened, but after none could be perceived. Of several medical gentlemen present some had confidence in the procedure, others not. Should the plan fail, an able assistant stood ready to seize the vessel if need be. To prevent the patient or assistants from being injured by the needle small corks were applied to the point and heel. After the last cut was made entirely severing the limb, the femoral artery was found perfectly closed, and standing out from the surrounding tissues for a distance of three-fourths of an inch with its mouth wide open. Some two or three small arteries required attention. These were tied with a very small loss of blood. Then the femoral artery was held between the finger and thumb, and a permanent ligature used. The flaps were brought together and stitched, and the patient put to bed. The only dressing applied to the stump was a compress saturated with a solution of dried sulphate of iron 3ss to the pint of water. No drainage tube was used. The patient recovered rapidly and is now quite well.

On August 12, two days after the amputation at the hip-joint, an amputation was made at the shoulder joint. The same form of compression was adopted with equally good results. The patient did not lose a drop of blood from the brachial artery—he also had a good recovery, and is now well. The needle in this case was passed from before backward, parallel to the axilla. In neither of these cases did the introduction of the needle cause the slightest bleeding from the puncture.

In all other operations where this hæmostatic has been applied a pin was used in the place of the needle. It was used to arrest a secondary hemorrhage after an amputation of the leg below the knee. The application was in the precise manner, and in a similar part of the thigh to

the other. It was introduced on Sunday morning and removed the following Thursday, having remained *in situ* four days; its presence causing no inconvenience, nor producing any local soreness or neuralgia of the limb.

The application of the pin and its freedom from any irritating effects suggested its promise of great usefulness in the treatment of aneurisms, more especially in those of the extremities. In the lower extremities there is no doubt any aneurism below Poupart's ligament would be amenable to this management. In the upper extremity any aneurism could be treated by this process, including the axillary space, and even the axillary artery itself below the clavicle. Aneurism of the sub-clavian arteries would also be proper situations where cure could be effected by this form of compression below the clavicles. This treatment does away with the necessity (in many of the cases surgeons are called to treat) where those terribly dangerous cutting operations are required, which formerly was the only resort left to them. It does away with the necessity of manual compression, which so seldom succeeds. What great advantages attend treatment by compression in this way when we reflect that aneurisms have been cured in nine hours by the less certain plan of manual pressure. Then let us reflect how much less the patient is exposed to the chances of surgical fever, or of septic troubles. As the introduction of a pin is nearly always a bloodless procedure, the opportunity for the introduction of any form of germ is next to impossible.

Since the experience of the three cases already attended to, nine others have occurred in which the pin and ligature alone were depended upon as the hæmostatic agent. Two for amputations of the leg near the knee, three for amputations of the thigh, and one for amputation of the arm. In another case of railroad injury where the right thigh was torn off at the lower third, and the remaining leg the subject of compound comminuted fracture with great loss of tissue below the knee. The pins and ligatures were applied to each thigh below Poupart's ligament. The patient being in a moribund condition, no radical procedure was resorted to. The hemorrhage was perfectly controlled. As was expected, the patient died in a few hours.

In the last case operated upon, a boy 9 years of age, where the thigh was amputated at the upper third, the lower portion having been torn off, instead of introducing the pin near the inside of the vessels of the thigh, as in former cases, it was introduced outside of them (external to the femoral sheath). The result was perfect. The operation was performed at night, by artificial light, the assistants being one medical gentleman, who administered the chloroform, and the step-father of the boy. But one artery had to be tied. The boy is perfectly well.

On three occasions only has any bleeding followed the introduction of the pin. One was in the case of a boy, the bleeding being very slight and venous in character. After the ligature was applied, the bleeding immediately stopped, nor did it return after the pin was withdrawn. Another case was similar to this in all respects. Both patients are well. In the case of the patient where pins were applied to both thighs, in one it was accompanied by a slight arterial flow. The result of the patient (who was too weak to bear the use of an anæsthetic) making a sudden movement of the thigh, which caused the pin to be partially withdrawn after it had passed under the vessels. It was pushed through, thinking it was sufficiently deep to pass them in safety; a slight flow of arterial blood followed, but whether it came from the femoral artery or only a small branch, could not be determined. After the ligature was applied, all bleeding ceased. No opportunity for an examination of the parts was allowed after death. In this instance a compress was placed over the track of the artery before the ligature was tightened.

In a few cases a compress was applied over the track of the artery before the ligature was tightened, but whether it added to the efficacy of the compression is very doubtful. In very fat subjects it might be better, and could do no harm in any case. The last case operated upon no compress was used, and the artery (femoral) was found to be perfectly closed and the only vessel requiring a ligature. The patient recovered.

Should an accident occur such as has been recorded, where the pin has been partially withdrawn, it ought to be at once removed and introduced *de novo*.

The following case was treated with success: While passing on the street, a horse had just received a severe penetrating injury in the lower part of the left side of the neck, near the shoulder, causing a wound of the left primitive carotid artery. The thumb was thrust into the wound, the end penetrating the artery. This restrained the blood until a piece of moistened sponge, half the size of the fist, was thrust under the skin. It acted as a compress, and caused quite a large tumor under the skin. A large pin was passed through the skin and sponge near the base of the swelling, and the figure-of-eight ligature fastened over it, which arrested the bleeding perfectly, not even a drop appearing on the surface. The stream of blood which had flowed from the artery was three-fourths of an inch in size. This form of compression of arteries as a prophylactic can be adopted in any operation upon the extremities, whether from traumatic origin for the removal of tumors or other surgical requirements, and also for arresting arterial hemorrhage as the result of operations or any form of injury. The pin in each case to be applied to the most appropriate



and convenient source of arterial supply. It may also in some cases be used in the neck, head or face.

The utility and adaptability of this procedure in military surgery, particularly after a battle, is very apparent. All surgeons serving in the army will at once see and understand its great worth on the battle field. At such a time surgeons have neither the time or convenience for performing final operations. They see many wounded who are fast losing their lives from the effects of hemorrhage, especially in the extremities, with or without fractures. These cases can only be cared for temporarily. There a tourniquet, the only means now in use is applied, and the bleeding temporarily arrested. This would, however, take up considerable time, and, after its application, is frequently apt to slip. The tourniquet also shuts off the return of the venous blood, produces much pain and swelling, and if left too long will bring on gangrene of the limb. The application of the pin would not be followed by any of these bad effects. It could remain for days, as has already been proved without pain or swelling, nor could it slip out of its situation or arrest the venous circulation, but would leave the parts in a very much better condition for repair to take place. Its application would require but a few minutes, five minutes would give ample time for its adjustment, the pain produced would pass off at once. Patients treated could be left with perfect safety and security for days, until a permanent and proper place could be provided. Cases of this kind have occurred under the observation of the writer during our recent war, and he feels confident if the pin had been used in place of the tourniquet that more lives would have been saved.

Let us now look into the adjustment of the pins. In the first application of this procedure a needle was used, and after it was introduced, the ends were protected by corks, for the protection of the patient or assistants. Now that pins are used one protection for the point is only necessary, and in most cases the pin lay so close to the surface as to be entirely out of the way.

In all twelve experiences have been had with this new application of a pin used as a prophylactic and treatment for hemorrhage, it has proved perfectly successful in all. Its simplicity and ready application, as well as its safety, are some of its strong claims for general adoption. It also does away with the most needed skilled assistant. For instance, compare this with the former plans for security against hemorrhage in amputation at the hip-joint, such as the tourniquet applied to the aorta, the introduction of the hand into the rectum, the application of the internal compress to the external iliac artery, through the rectum, or the Davy lever or any form of ligature or tourniquet applied to the upper part of the thigh

at the groin, all of which are sure to give way when the head of the thigh bone is destroyed. Some of these are nearly as dangerous as the amputation itself and have led to fatal results. The author claims his method in hands of any surgeon or medical man of the slightest anatomical knowledge can perform this little operation of introducing and adjusting the hæmostatic pin with perfect ease.

A few words as to the treatment of aneurisms. No case has come under the care of the writer, but he feels it promises better results than any so far put in use, and one of its greatest virtues is (in this day of the germ theory) that it gives no opportunity, or nearly none, to their introduction into the system.

The same principle can be applied should we at any time meet with an abnormal distribution of arteries, as was the case of a division of the external iliac into two femorals in the case of Val Mott, when he successfully amputated the hip-joint. If the profunda be found it could be compressed in the same way as the femoral.

The results which have followed the application of this mode of suppressing bleeding have been so eminently successful that the author feels conscious that it cannot fail to come into general use. Its first application in the grandest and most dangerous amputation known to surgeons, illustrates its influence for good by converting its most dangerous complication into the simplest part of the operation.

#### THE SUCCESS OF REPEATED OPERATIONS UPON THE SAME NERVE, IN FACIAL NEURALGIA.

BY EDMUND ANDREWS, A.M., M.D., LL.D.,  
SURGEON OF MERCY HOSPITAL, CHICAGO, ETC.

Neurectomy performed for *tic douloureux* permanently cures some patients, and effectually stops the pain of nearly all the rest for a period of from six months to two years, yet the majority sooner or later relapse. Clinical experience has demonstrated to me the somewhat surprising fact that these relapsed cases may be freed from their pain over and over again by repeated operations at exactly the same spot, even though the surgeon fail utterly to get away any more tissue from the stump of the nerve.

This result was unexpected to me, for Ross and others who speak of repeating the neurectomy in relapsed cases seem, like myself, to have supposed it necessary to find the stump of the nerve and operate directly upon it. Clinical experience also shows the important fact that operations performed in the old cicatrix cause little or no shock or hemorrhage, and, while arresting the pain for months or years, become a mere trifle in point of severity.

The numerous examinations thus made with



the knife show that in relapses after neurectomy there is usually no reproduction of the excised portion of nerve.

A single typical case may illustrate my meaning as well as more.

Mrs. M., aged about 69 years, had suffered from violent trigeminal neuralgia in the inferior dental nerve. She had caused all the teeth of that side of the lower jaw to be extracted without benefit, the pain being still referred in full violence to the gums and adjacent parts. In reply to her entreaties that I should cut away the offending gum for her relief, I explained that it would fail, just as the extraction of the painful teeth had done, and that the nerve must be cut further back.

Unable to comprehend this, she refused the neurectomy and pleaded for a gum excision. As there was a faint hope that a point of nerve compression might exist in the cicatrix, or if not, that an impression from there might induce a temporary beneficial change in the nerve centres, I at last consented, and removed the gums and the upper edge of the bone on which they rested. Not even a temporary respite from pain was obtained by the operation.

Some weeks later she begged for the nerve resection which I had previously advised. Etherizing her, I raised the integuments and the masseter muscle from the ramus of the lower jaw by means of a semicircular flap, and trephined the ramus in such a position as to come down upon the inferior dental nerve, where it enters the bone from the inner side. Separating the dental artery, I grasped the nerve firmly with a strong forceps, wound it around the beak and slowly pulled until I broke it off at considerable depth, thus taking it away by avulsion, as advised by Marshall, Jewell and others. The wound was dressed antiseptically, with a small drainage-tube in it. After the pain of the operation itself subsided, she was found completely free from neuralgia, and remained so for a year and a half. There was only a very moderate shock from the operation.

At the end of a year and a half she relapsed, and after trying medication in vain, begged for another operation. Hoping to find the stump of the nerve and remove another piece, but not yet comprehending that success did not depend on further nerve excision, I etherized her and again raised the flap, cutting in the line of the old cicatrix. The tissue yielded very little blood. The fenestrum in the bone made by the trephine at the former operation was still open so far as bony material was concerned, but the space was filled with tough cicatricial tissue. With a tenotome I carefully detached the cicatrix from the bone, dissecting inward until I reached the soft connective tissue within the jaw. I then seized the cicatricial button and, pulling it outward, sought for the stump of the nerve beyond. The search was in vain, as the stump could not be

discovered, so I applied a twisting force to the cicatricial button and tore it away, bringing with it a little of the connective tissue attached to its inner face, but bringing out no nerve tissue. The wound was then closed and dressed antiseptically.

To my surprise the success was brilliant. The patient was completely freed from pain and remained so for two years, when she took a railway journey of 1,000 miles and followed it by considerable exposure to rough weather in an unaccustomed climate, which resulted in a return of the pain, referred to its old place in the gums. After trying anti-neuralgic medication for some time, she insisted on another operation. I consented, and repeated the former process exactly, raising the flap by an incision in same line, and detaching the circumference of a tough button of cicatrix from the old trephine hole by the careful use of a tenotome. I then seized the cicatricial mass with stout forceps and, twisting it strongly, took it away by avulsion.

Working thus in cicatricial tissue, the operation was almost bloodless and totally without shock. The dressing was antiseptic, of course, and the patient recovered with ease and was again completely cured of the pain, and has continued so thus far, that is to say, about a month. There was no nerve trunk discoverable in the tissue taken away, nor in the bottom of the wound.

I had obtained like successes with other patients by searching for the stumps of excised nerves without being able to find them, but this was the first time I had deliberately operated with no hope of finding the nerve. I presume the curative principle is simply this: However deeply the cut extremity of the nerve may lie after the first operation, it necessarily becomes connected by a line or cone of cicatrix with the general mass of cicatricial tissue which forms in the wound and fills the fenestrum made by the trephine. The stump of the nerve is thus anchored to the cicatricial mass even if not very near it, hence the operator who carefully separates the cicatrix from the bone and then twists or pulls it away, necessarily makes a strong traction upon the nerve stump attached to its inner prolongation; in short, he makes a powerful nerve-stretching operation which acts on the same principle as Nussbaum's. My experience shows that this may be successfully repeated several times and, for aught I know, many times at the same spot.

An important point is that the repeated operations, being made in cicatricial tissue, bleed but little and produce no shock, and in fact are trivial operations, so that if they can relieve the suffering, though it be only for a year or two at a time, they will be a boon earnestly desired by the patient as long as they continue to be a success, and we may expect that, by persistence, some of the cures will become permanent.

It is a fair question whether the first operation

should not usually be a nerve-stretching, as advised by Nussbaum, Horsley, Bowlby, Underwood and Ross, instead of a neurectomy, since the repetitions can just as easily be made, if required. In the case of the inferior dental nerve the first operation can be performed from within the mouth, and thus avoid a visible scar. Operations on the supraorbital and the infraorbital trunks require moderate external incisions.

For the purposes of this article we may divide the obstinate trigeminal neuralgia into three groups:

1. Those where the peripheral extremities of a nerve, or portions of the trunk not inaccessibly deep, are the seat of inflammation, pressure, or other forms of irritation. These cases are rare, but they can be positively and permanently cured by neurectomy, and can be relieved at least by nerve-stretching; operating, of course, between the seat of irritation and the brain.

2. Where the inflammation has already passed along the nerve and reached the semilunar ganglion, or at least pretty near it, or where these deeper parts are primarily irritated from various causes. In these cases, and they are the majority apparently, we cannot cut nor stretch between the diseased part and the brain, but we can stretch the nerve, or remove it by avulsion, or excise a piece of it at no great distance from the inflamed ganglion itself. A nerve-stretching here acts mechanically to some extent upon the substance of the ganglion itself, bringing immense relief, and sometimes permanent cure, to the patient. It is also the opinion of neurologists that by cutting off the irritating external impressions from reaching the diseased part, we give them a prolonged "physiological rest" and strongly favor recovery.

3. Where the seat of irritation is in the brain or medulla oblongata, or in the nerve between the medulla and the semilunar ganglion, but not in the ganglion itself, we are unable to exert any direct mechanical force upon it, but the operations may still be curative by cutting off the reception of irritating external impressions and obtaining for the diseased part of the cerebrum the physiological rest already mentioned.

My conclusion is that repeated operations at the same point are of great value in relapsing cases, that they are not dangerous nor exhausting, and afford a patient a relief which, by some repetitions, will often make him entirely comfortable for the remainder of his lifetime.

No. 6 Sixteenth St., Chicago.

## HEART STRAIN AND WEAK HEARTS.

*Read before the American Climatological Society, Washington, D. C., September 21, 1888.*

BY JAMES J. LEVICK, M.D.,  
OF PHILADELPHIA.

In the remarks I am about to offer I have put together a few facts and notices of cases coming under my immediate care or notice. The subject is one which has already claimed considerable attention. Were I to give a bibliography, I should name among those who have written on this subject the President of this Society, Dr. Loomis; Drs. Robinson, Kelly, DaCosta, Delafield, Chew and others.

I became, myself, first personally acquainted with the morbid condition referred to, in my early manhood, in a hurried walk up Mount Washington. This required hard climbing, as any one who attempts its ascent on foot will find. Long before I reached the summit I was conscious of an oppression in breathing, a want of breath in fact, and a distressing ache of the heart, which made me regret the venture. From that day to this I have never made the ascent of a mountain of any considerable height without a reminder of this occurrence. A similar experience is recorded by Dr. Clifford Albutt, and by mountain climbers in the Tyrol, and elsewhere. That a strain of the heart made in this way, or by any other modes of excessive muscular action, even in early life, may leave its effects for years, I have not a doubt.

Hence, I am not enthusiastic when I read of the tremendous strain brought on the heart of the successful oarsman in his last "spurt," by the champion lifter of many hundreds of pounds, or by the prize taker in the run of so many miles. Nor do I at all sympathize with the craze for climbing mountains, in which so many young men and women indulge.

It is true that in these young athletes the heart and its adjacent tissues are much better able to bear and more readily to recover from the strain than they are later in life, but that, even with them, a permanent injury may be received, I well know.

I have no better name to offer for this morbid condition than that of heart strain, nor can I apply to the condition which follows the oft repeated occurrence of these phenomena any title more descriptive than that of *weak heart*.

There is indeed a weak heart occurring in the course of, or as a sequence of, acute disease, very different from that to which I refer. It is a condition which we cannot be too vigilant in watching for, or better, in guarding against. It is notoriously frequent in the parturient woman after an exhausting labor, it is one of the most frequent sequelæ of diphtheria, but it is also not unfrequently a concomitant of pneumonia and of typhoid fever, and I suspect many of us can re-

TO CALCULATE THE CAPACITY OF CISTERNS.  
—A correspondent of the *Scientific American* gives the following rule for calculating the capacity of a cistern:

*Rule.*—Square the diameter of cylinder in inches, and multiply by 0.0408 = gallons per foot.

call cases in which, after the patient has seemingly passed successfully through these diseases, a fatal result has followed the undue taxing of the heart by the patient too early assuming the erect position.

But the weak heart to which I refer comes on gradually, and after repeated strain, sometimes without obvious cause, though such cases are often associated with a gouty diathesis. More frequently a careful investigation will show that nervous causes, emotional in their nature, and especially those of a depressing character, loss of fortune, or of good name, the misconduct and disgrace of children, have been followed by this heart ache. Now, the slightest unusual exertion, the simplest emotion will bring on an attack, and the temporary stasis of blood in the heart favors the gradual distension, dilatation and weakening of the heart itself. And yet this dilatation is rarely such as to develop cardiac murmurs. I have known many more sudden deaths to occur from heart trouble, where there was no appreciable murmur, than where there was one. Given, then, the absence of cardiac murmurs, the presence of heart ache, oppression in breathing on rapid exertion, going on to dyspnoea, though rarely the dyspnoea of valvular disease, with pain in the epigastrium rather than in the hypochondrium, with eructation of gas, coming on later, and affording relief, and we have symptoms which have long been grouped together under the title of "Angina Pectoris," the diagnosis of which would seem to be of the simplest character. And yet the early detection of the nature of these phenomena, so amenable to treatment early, so resisting later, is often neglected. In the first place, the pain is almost always referred by the patient to the epigastrium and regarded by him as a disorder of the stomach. This is confirmed if there be, as there almost always are, eructations of gas, giving relief to the patient. It is a case of dyspepsia, or of "bilious" disorder, and for a long time is treated as such. No lesson should be more early and more emphatically impressed on the mind of the young physician than that he be not misled as to the real seat or cause of the pain by the place or position to which the patient refers it. Many a case of thoracic disease, pleurisy, pneumonia and cardiac trouble, has at first escaped detection because the patient, especially if he be a child, has pointed to the epigastrium or the abdomen as the seat of pain. Nor should the absence of the historic pain down the left arm mislead. It is not an essential symptom, especially in the early stages or milder forms of this malady. Unless properly treated and early, the symptoms which have been enumerated become more and more aggravated, and death suddenly occurs. In cases of sudden death occurring to patients thus affected, under my own care or notice, the following appear to have been the imme-

diately exciting causes of death. They are noted here that persons thus affected may avoid them.

First. *Walking on slippery, icy pavements on a cold day.* The patient had walked three or four street blocks to church, and died soon after taking his seat there.

Second. *Hurrying to railway station immediately after eating a hearty meal.*

Third. *Driving for some miles a hard-mouth horse.*

Fourth. *Riding a hard-mouth horse.* This patient had been helped by gentle horseback riding.

Fifth. *Sawing off the limb of a tree in his own park.* The limb required some effort to reach, the position was a constrained one. This gentleman had had frequent attacks of this disease—a feeble heart. A violent paroxysm followed this exertion, and he died before medical aid could be obtained.

Sixth. *Hurrying from one steamboat to another, carrying at the same time a heavy hand-bag.*

Seventh. *Assisting to carry a trunk from the railway van to the station.*

Eighth. *Shovelling coal into the furnace in the cellar.*

Ninth. *The act of sexual intercourse.* Three cases of this kind have recently come under my notice. In the first, a married man, æt. 65, a violent paroxysm of cardiac pain, immediately followed this act. The patient lived for more than six months, was liable to severe paroxysms of dyspnoea—which he never had before—and died suddenly as he arose from his tea-table. A post-mortem examination showed the absence of valvular disease, but the existence of a firm fibrinous clot in the ventricle, which was evidently ante-mortem, and which doubtless was formed coincidentally with the first severe paroxysm, six months before.

And this leads me to say that I have no doubt coagula, thrombi, and heart-clots not unfrequently form in a prolonged paroxysm of this kind. The second case was that of a gentleman æt. 72, single, and remarkably hale and vigorous for his years, but who had at long intervals attacks of heart pain. After a morning drive, his coachman driving, he "visited"—I use his own words—"a lady and committed venery." He was almost immediately seized with an intense pain near the heart, but managed to walk home, a short distance, and I found him there with a cold skin, very feeble pulse, although he walked forward to receive me. He was immediately put under treatment, but death rapidly supervened. A somewhat similar case is reported of a judge of the Nottingham assizes, who was induced to go home with a young woman of the town, who testified before the coroner that immediately after having had intercourse with her, he turned on his side, gave a groan and died. I have recently seen in con-

sultation a fatal case of heart failure in a elderly man, where the history of the case pointed to this as the cause of death.

A careful examination into the history of this form of heart trouble leaves no doubt on my mind that it occurs more frequently in cold than it does in warm climates.

It is very frequent with us of the Northern and Middle States. It is appallingly frequent in England with its cold, wet and depressing climate, and especially so among the more intellectual classes, and as I have already said is, I believe, often developed in early life by boat racing, which, becoming now so general with us, has for generations been the practice in the English universities.

While I have no doubt that the direct influence of cold, is a large factor in the development of this morbid condition, the easy, careless, indolent life which a warm climate induces may have much to do with its rarity among the Southern people.

Intense cold, occurring periodically, not only predisposes to this condition, but also invites the paroxysm. The terrible blizzard of last winter proved directly fatal to many subjects of this malady, and laid the foundation of the disease in others who from lack of railway conveniences were, to reach their homes, compelled to battle with wind and snow as they never before had done. So thoroughly convinced was the late Dr. Ludlow, of Philadelphia, that cold was an exciting cause of these attacks of heart pain, that he proposed to call the fatal cases occurring in winter cases of *cold stroke* as opposed to *heat* or *sun stroke* of the summer.

Alive then to the predisposing and exciting causes of this malady the treatment becomes a simple, though not always a successful one. And yet, early detected—not misled by the supposed seat of pain and regarded as a gastric disorder—the patient will derive great benefit, first by the simple avoidance of exciting causes, and secondly by a change of climate.

I know of no place in this part of the country, equal, in the summer time, to that of the Adirondacks of Northern New York. The late Dr. Ely, of Rochester, who suffered in this way, has told me that he found great relief at Saranac Lake, and I have known others much helped at St. Regis. I do not mean by naming these mountainous regions to advise the climbing of mountains as recommended by Oertler,\* but in this delicious atmosphere an amount of exercise may be taken, even gentle pulling with the oar which could not be borne elsewhere.

Next to this, if there be no valvular disease—and the two conditions are sometimes associated

—and if the patient be a good sailor, the happiest results may be expected from an ocean voyage and foreign travel. But, before the patient starts on this voyage, a solemn compact must be made with his physician that he will not hurry for trains or carry hand luggage, a practice much more common in England than it is here.

In the English Channel islands, the Isle of Wight, Jersey, and especially in Guernsey, he will find beautiful scenery, a balmy, healthful atmosphere, the comforts of home, and, in Guernsey, at extraordinary little cost. I believe by such a course of treatment, early adopted, and, as has been said, by the avoidance of exciting causes, this condition of the heart may be greatly helped, if not entirely cured, and this, too, without the use of drugs, or, if any, those of the simplest character.

Next in value to a change of climate and moderate exercise in a favorable environment, I believe most benefit will be derived from the prolonged use of moderate doses of *nux vomica*, five drops of the officinal tincture three or four times daily, either with or without the compound tincture of gentian. Nitro-glycerine has been strongly recommended, and doubtless has its value, though it has more than once disappointed me. At the recent meeting of the British Medical Association, held in Glasgow, a paper was read on *The Cactus Grandiflora*, which, in tincture, was recommended as especially suited to this condition of the heart, and as free from any of the objections which apply to digitalis, strophanthus, and to convallaria. This remedy had previously been recommended by Rubini and others. In a violent paroxysm of heart pain, I think we shall all agree that nothing is so promptly effective and, judiciously used, so free from danger as is the inhalation of a few drops of nitrite of amyl—a much safer remedy for a feeble heart than is the hypodermic injection of morphia, from which I have known fatal results. Digitalis, as a remedy for this and other forms of cardiac trouble, has been largely used, and in expressing my estimate of its value I shall probably differ from some of those who hear me. Until within about twenty years ago or more, it was universally taught that digitalis was “a heart sedative;” that, in its long-continued use, a cumulative effect was induced, which, if not carefully watched, was liable to be followed by fatal consequences. Suddenly there came the announcement that all this was an error, that physiological experiments had shown digitalis to be a heart tonic, and that the cumulative action of digitalis was a delusion, if not a snare. And then came the natural rebound from the old caution, and a generation of physicians has grown up, who, regarding it solely as a heart stimulant, use it with a freedom—I had almost said a recklessness—which I honestly believe is a most pernicious practice, and against which I wish to enter an

\* If I understand the treatment proposed by Oertler, it is not all intended for the class of cases we are considering, but is rather a system of well regulated diet and exercise admirably suited to the obese, beer drinking people of Central Europe.

earnest protest. There is no form of heart weakness in which it has not of late been used, whether it be the chronic form of heart-failure which has been spoken of, the paralyzed heart of diphtheria and other acute diseases, nay, I have even known it administered to a poor, parturient woman bleeding to death from placenta prævia whose failing heart it was proposed to stimulate, not by brandy, ammonia, and such well-known remedies, but by—digitalis!

Whether, then, digitalis be a heart sedative or a heart tonic, and I believe under certain circumstances it may be one or *both*, it is a medicine which requires judgment in its use. It is not to be administered merely because the patient has a weak heart. It should never be used until careful auscultation has revealed the condition of the mitral, aortic and other orifices. If we accept the teachings of modern physiology that it gives increased power to the heart, we are bound to accept the same authority that, by contracting the arterioles, it increases also the resistance to the exit of the blood from the heart. If we accept the unmistakable authority of long, practical experience we must admit that cases of sudden death not unfrequently occur to patients using digitalis whose death could not be referred to heart disease alone. Such cases teach us that if digitalis be used the dose must be a small one if the patient be walking about, that its effect on the pulse must be closely watched, and that if the dose be increased the patient must strictly keep the recumbent posture. They also teach that in sudden failure of heart power digitalis is a doubtful if not a pernicious measure; that it is never to take the place of ammonia, brandy, oxygen and other well-known stimulants. In a word—in the hygienic measures which have been named, in the avoidance of exciting causes, in iron, and especially in nux vomica, we have remedies more certain in their effects, more free from danger than is digitalis.

I am indeed quite disposed to believe that in the morbid condition we have been considering, it would be better to dismiss from our practice those medicines which are supposed to act directly on the heart and to content ourselves with those remedies which act by improving nutrition and giving tone to the general system. For, after all, it is not the heart tissue which is alone affected, or which is the most important factor of the disease. Rather is this to be found in those structures which preside over its innervation, nutrition and function—those great ganglionic centres, of which we say so much, but know so little—which are indeed the Huguenots of pathology, to which everything that is obscure or undetermined in the ancestry of disease is with such complacency and self-satisfaction attributed.

## A CASE OF TYPHOID FEVER TREATED WITH SALOL,—WITH REMARKS.

BY R. H. DAY, M.D.,

OF BATON ROUGE, LA. EX-PRESIDENT OF THE LOUISIANA STATE MEDICAL SOCIETY, AND PERMANENT MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.

Willie Thomas, colored, æt. 17 years, was taken sick on Monday, October 22, 1888, was brought home on Friday, the 26th, and on Monday morning, the 29th, I was called to see him.

The following conditions were noted: Skin hot, dry and pungent, pulse 110, temperature 102.4° F., respiration not counted. Tongue red, parched and deeply fissured, with sordes collected upon front teeth and lips, low muttering delirium, urine scanty and high colored, stools not very frequent, but small, watery, and offensive; abdomen slightly tympanitic and sore upon pressure.

This boy, residing in Baton Rouge, had gone to work on a sugar plantation, necessitating hard work, loss of rest, rough living, and considerable exposure; and a week of cool rainy weather during the time greatly intensified these unsanitary conditions. This sickness was ushered in with a slight chill, succeeded by high fever, which was said to have been continuous up to the time of my visit, the ninth day of his sickness; but I suppose there had been slight morning remissions, since at my evening visit of this day I found his temperature up to 105° F. and his pulse 130.

I had no difficulty in diagnosing this as a typical case of typhoid fever—not *typho-malarial*, but *typhoid*, *ab initio* and *per se*, induced by the cold and wet to which he had been exposed, with loss of rest at night, and the other unsanitary conditions to which he had been subjected. There may have been some local potent factor, other than those mentioned, but if so, I have not been able to make the positive discovery.

At my first visit I made the following prescription:

R. Hydrar. chlor. mitis. . . . . grs. xx  
Pulv. ipecac. pulv. opii . . . . . aa grs. ij  
Pulv. nitras potass. . . . . grs. xxx

℞. Divide into six powders.

S.—Give one every two hours; also applied over the abdomen a warm flax seed meal poultice, with peach tree leaves incorporated with it.

In the evening of same day, when I saw him, he had taken five of the powders, which I then discontinued, and prescribed 10 grs. of quinine, with 2 grs. antifebrin in combination, every four hours. Up to my visit next morning, 30th, he had taken four doses with no obvious effect whatever, his temperature being up to 103° F., and his general condition, if possible, more threatening. Satisfied that quinine would be useless, and realizing the extreme gravity of the case, and its certain tedious progress, even should a fatal result be averted, I determined to give salol a trial, a drug that has recently gained some favor with the profession in cases involving irritation and in-

inflammation of the mucous coat and glands of the intestinal canal.

I prescribed, formed into an emulsion, 5 grs. salol and  $2\frac{1}{2}$  grs. Dover's powder, to be given every three hours, and also 8 grs. antifebrin every three hours, till his fever was reduced, and then to be repeated whenever a rise in his temperature returned. My visit in the afternoon of this day showed a slight improvement in his symptoms, his temperature standing as in the morning, while his tongue was less dry and parched, and he had had only one discharge from his bowels, with a freer urination. I directed the same treatment continued through the night.

On Wednesday morning, 31st, the third day of my attendance, and only 24 hours from the commencement of the salol mixture and the antifebrin, I found my patient free of fever, had rested well during the night, and had taken only two doses of antifebrin during the night, one in the early part and the second about 2 o'clock A.M., while he had been taking the salol mixture every three hours since it was commenced. His temperature was now normal, his tongue moist, cleaning off, and he had passed no stool for 24 hours. Thursday morning, Nov. 1st, temperature remained normal and his general condition evidently improved. He had rested well all night and had not needed a single dose of antifebrin. No action still from his bowels, but no uneasiness or tenderness under pressure or percussion, and I would not permit a cathartic, nor even an enema, to be given, which was urged by his relatives. The salol mixture was now ordered every six hours.

Friday, Nov. 2d: Patient unmistakably convalescent; tongue cleared off and moist; temperature normal, and some desire for food. Saturday morning, Nov. 3d: Patient's convalescence progressing and well assured. Salol mixture advised to be given three times a day and kept up for several days and the patient discharged.

*Remarks.*—While the results in one case of sickness cannot establish or settle the value of any one remedy or line of treatment in a given disease, yet such was the prompt and decided good effects of salol in this case of typhoid fever, that I feel I should be derelict to my professional duty if I did not promptly report my experience of it to the profession.

Here was a typical case of typhoid fever, grave from its onset, clearly pronounced by all of the characteristic symptoms of this disease, existing a week without medical or hygienic treatment, and under very unfavorable environments; a case, representing a class of cases, usually running from three to six weeks and longer, and frequently terminating fatally under our best known plans of treatment, that was aborted or cured in four or five days with salol, assisted by Dover's powder; and antifebrin only as needed to keep down the febrile temperature.

So clear are my convictions of the good results achieved directly by the use of this new therapeutic drug, that I shall certainly give it a more extended trial in cases of typhoid fever, as well as in enteric affections, where the mucous membrane, follicles and glands are in an irritable or inflamed condition—a condition which so frequently complicates many of the diseases in Southern latitudes (and Northern latitudes as well), or supervenes during their progress.

I trust that the observant and thinking men of the profession, who may read this report, will be induced to give salol a careful trial in their typhoid cases, and in other cases where the enteric pathological lesions exist as are above indicated, and give the result of their trial and observations publication in our medical journals, that its real value and correct therapeutic properties may be known and well defined.

"Salol," says Squibb, "is said to be a combination of about 60 per cent. of salicylic acid and 40 per cent. of phenol or carbolic acid," combining the properties of these two agents; and further adds that it is controlled by patents, both in Germany and this country. This I regard as very unfortunate, since all mercenary tricks in pharmacy or any other branch of medicine are opposed in principle to the humane and scientific labors of physicians to benefit the human race, and elevate and dignify the science of medicine.

But while these patents upon salol are to be regretted and denounced, and will temporarily enhance its price, they should not prevent a fair trial of its therapeutic properties and merits as a medicinal agent, since the paramount consideration is the good of the human family.

#### BRIEF NOTE ON TWO CASES OF PRIMARY, DIFFUSE, EXFOLIATIVE DERMATITIS. (PITYRIASIS RUBRA?)

*Read before the Section on Dermatology and Syphilography, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

BY FRANK WOODBURY, A.M., M.D.,

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In eighteen years of clinical experience in private and hospital practice, I have encountered only two instances of the pathological condition which I believe is best described by the title of "primary, diffuse, exfoliative dermatitis." Were they cases of pityriasis rubra? This is a question that I find difficult to answer, knowing that this diagnosis will not be accepted by some, although the cases, to my mind, typically presented the characters usually described in the books as indicative of that disease.

It is often said in a facetious manner that, if the patient get well, it is not a case of pityriasis



rubra. Should this be accepted as a test, then only one of the cases I have to report will answer the requirement of the dermatologist; the other, by making a good recovery, being *ipso facto* excluded.

In using the word "primary," I wish to be understood simply to imply that the disease was not part of a systemic morbid process (*i. e.*, like scarlatina or syphilis); as far as I was able to discover, no such specific cause was operative in either case. At the same time, I do not mean by "primary dermatitis" rigidly to limit the morbid action to the skin itself so as to exclude changes in the nerves, or a pathological state of the great ganglia. On the contrary, I have been impressed in the study of these cases with the fact that the symptoms and course of the disease point to possible involvement of the nerve centres or peripheral nerves as the real *causis morbi*, a condition, however, which thus far is purely a matter of inference, and not of demonstration by any means. I may say that my treatment was based upon this theory, the leading indication being, *first*, to relieve the irritation of the skin, which, by preventing a proper amount of sleep, produced exhaustion of the great nerve centres; and *secondly*, to build up the system by easily assimilated, nourishing food, and particularly by fatty substances like cream and cod-liver oil in pancreatized emulsion. Fat being the special nutriment of nerve structure, an effort was also made to introduce this agent through the skin by means of inunction with cocoa-nut oil.

I must apologize for the paucity of the notes of the cases; my sole object in submitting them is to introduce the topic for discussion, in order to obtain your views upon the relation of such diffuse exfoliative dermatitis to the disease which has been recognized in Europe by the name pityriasis rubra, and, if possible, to elicit the pathognomonic features of this disease, if it really exists as a distinct affection.

*Case 1.*—Julius B., æt. 40, a member of a German band which furnished music for a summer garden on the outskirts of Philadelphia, was admitted June 30, 1882, into the German Hospital, and I saw him on the following day. He then presented the following appearance: He was well nourished, appetite and digestion fairly good, intelligence and special senses unaffected; he had no fever. His skin was uniformly red like a boiled lobster, and was interspersed with thin epidermic scales which were everywhere seen curling up from the surface and adhering by one edge. Very few of these scales were as large as his little finger nail; most of them were less than a quarter of this size. They were nearly round, or irregularly elliptical, and of about the uniform thickness of white tissue paper, which they greatly resembled; many of them lying in the bedclothes were much smaller, and appeared broken up. These scales were

freely shed and a goodly quantity, half a pint or more, were shaken out of his bed several times daily. The palms of the hands, the soles of the feet, and the hairy scalp were not exempt; even the eyebrows and thin beard were mixed with scales. The skin was not thickened. There were no crusts; the only approach to such a condition was where the patient had injured his skin in scratching and had produced some linear or irregular abrasions, which were covered by dried serum. No eruption was seen upon the body, either papular, squamous, vesicular or bullous. The skin was dry, and where the scales had been shed was shining.

He did not complain of the itching, but constantly scratched or rubbed his limbs or body, apparently automatically and unconsciously. The irritation did not keep him awake at night, although it shortened his sleep. The surface of the body was not moist, but had rather a greasy appearance suggestive of fine parchment; he was quite susceptible to cold. He came into the hospital for treatment more on account of the peculiar appearance than because of any suffering or discomfort attending the disease.

His family history was negative. His own health had been generally good. Syphilis or venereal disease was denied. He was not subject to skin eruption, but thinks that he had some moist tetter some years before, and was always troubled with dandruff. The present affection appeared about the head first, some three weeks before admission; he was not very clear with regard to the first manifestations of the disease; he evidently was not a close observer, and probably was not very familiar with the usual appearance of the surface of the body and did not bathe very often. At all events, the disease gradually spread over the surface of the body until it attracted his attention by the general scaling off of the epidermis, which became so marked about a week before his admission that it attracted the attention of others, and he was led to seek medical assistance. He was ordered to bed and treatment instituted which resulted in cure, and he was discharged (July 22) in three weeks' time perfectly well.

*Case 2.*—Mr. X., æt. 69, of German descent, born in the suburbs of Philadelphia, a retired merchant, came under my care after he had been treated for nearly two months by another physician, who apparently had not recognized the disease. I was called to see him January 15, 1887, at a time when his case was pronounced hopeless by his former medical attendant. The characters of the disease were identical with the preceding, except that around the ears there was an eczematous appearance, and in this patient the itching was a marked feature. He was constantly rubbing his hands or scratching his limbs, or picking at his face. There was also an evident mental impairment; at times he was slightly delirious, and a



few days before I had been called in he had gotten out of bed and found his way into the street, only partly clad, so that he had to be constantly watched. This feature may have been due to the nervous exhaustion caused by the disease, to senility, or to chronic alcoholism, or possibly to a combination of all of these causes.

The history given me was very briefly the following: He had a gouty ancestry and was fond of malt liquor. When a young man he had an eruption upon his face and hands, and was subject to furuncles. In 1885 he had an ischio-rectal abscess, and was very sick after it was opened. In March, 1884, he had an attack of gout, and for some time afterward his leg was much swollen and red, and was attended by pruritus. The present disease apparently commenced in his eyebrows and behind his ears. As he scratched the skin it became inflamed, and in some places small points of suppuration developed; at least this was the statement made to me by his wife. He did not take proper care of himself and was very irregular in his eating, drinking and sleeping. The inflammation, about ten weeks before I saw him, had spread from these centres about the head to the rest of his body. I could not ascertain positively whether distinct areas of dermatitis occurred upon the body and subsequently coalesced. His mind was not very clear, and his family could not give me accurate information upon this point. He had no pyrexia, and were it not for restlessness and insomnia, he would not have been much incommoded by the disease. The scales were very abundant, so that his wife said that she had to remove them from the bed several times daily with a dustpan. His appetite was good, but was easily satisfied; he had a good deal of thirst.

For a time the patient seemed to markedly improve under the treatment, but it was only temporary; his vital forces were not sufficient to enable him to rally, and he died of exhaustion on February 3, in a little over two weeks after I took charge of his case. I might say, however, that the condition of his skin had decidedly improved in this short period; his itching was decidedly relieved, and the scales were reduced to one-third of their former quantity, and he was enabled to rest much better at night. The mental symptoms, however, did not much improve, and toward the last he was constantly delirious and he died comatose.

NOTES.—With regard to the diagnosis of these cases I would state that, in every essential particular, they were alike. In the second case I had the valuable assistance of Dr. Arthur Van Harlingen, who saw him several times, and who gives me the following extract from his notebook:

"The eruption was of several months' duration; it consisted in an extreme general scaldiness of the skin over the entire body, accompanied by diffuse redness with slight infiltration. The exfoliation

eruption consisted of very numerous, generally small scales, easily detached and produced in great quantity, so as to fill the bed after lying in it all night. The scales on face and scalp were small, while those on the palms and soles were large. There were abrasions here and there from scratching, the eruption being very itchy."

The opinion which I expressed that it was a case of primary exfoliative dermatitis was approved by Dr. Van Harlingen, who, however, withheld his decision with regard to its being a case of pityriasis rubra.

Dr. John V. Shoemaker, who subsequently very kindly saw the case with me, thought—so I understood him at least—that it was a typical illustration of this rare disease.

I shall not take up time by discussing the points of diagnosis between the morbid process here illustrated and psoriasis, eczema squamosum, lichen ruber or pemphigus. I will say, however, that in the presence of itching these cases do not agree with the description of pityriasis rubra given by some writers. How a diffuse inflammation of the skin, such as we find in these cases, attended by free desquamation, could escape being attended by some irritation and itching, I cannot imagine. A high degree of pruritus certainly was not noticed, but itching and scratching were a feature of the affection from which these patients suffered.

With regard to treatment, it may be said to have been not specific, but supporting. Absolute rest in bed with a bland diet, principally milk, was insisted upon. Cod-liver oil with hypophosphites, the elixir of calisaya, or compound elixir of iron, quinine, and strychnine, with saline laxatives, and small doses of morphine at night, comprised the internal medication. Alkaline warm baths once a day (80° to 90°), followed by free inunction with cocoa-nut oil, decidedly ameliorated the condition of the general surface, while for the local lesions caused by scratching the benzoinated oxide of zinc ointment was freely used. At the suggestion of Dr. Van Harlingen tar (*picis liquidæ* ʒj; *ung. zinci oxidi*, ʒij; *petrolati*, ʒvj.  $\text{℞.}$ ) was also used with excellent effect in relieving the irritation.

With regard to causation, I point to the fact that one patient was a German and the other of German parentage. One was distinctly gouty. Both used malt liquor freely and were irregular in habits of eating, and rather negligent of the state of the skin. Both told me that they were fond of bread and mustard, and frequently took a lunch of this kind in preference to going home to meals. Personally, I am inclined to accord to the mustard and chronic gastric irritation (*gastric catarrh*) a large share in the etiology of the disease, to which other causes, such as alcoholism, undoubtedly contributed. The urine, though repeatedly examined, gave no warrant to the hypothesis that renal disease was present in either of the cases above reported.

## NAUPATHIA OR SEA-SICKNESS. SYMPTOMATOLOGY, PATHOGENESIS, AND EFFICACIOUS TREATMENT.

*Read by Title at the Thirty-ninth Annual Meeting of the American Medical Association, May 11, 1888.*

BY W. W. SKINNER, M.D.,  
OF PEORIA, ILL.

It is not without much reflection that I venture to bring before the Association a paper upon such an old subject as sea-sickness. This subject, however, which I have the honor to develop anew before this assembly, has recently become enriched both by new theories regarding the nature and pathogenesis of sea-sickness and, what is still more practical, by new methods of treatment which bring into action medicinal agents not hitherto exhibited in this affection, and which are recognized to have beneficial and even curative effects. There is much in this matter that is new and important; the Academy of Medicine of Paris recently discussed it in one of their séances; and it may be profitable to briefly review it here, in order that we and our patients may be spared that atrocious suffering to which those who venture upon old Neptune's domain are exposed.

The author of this paper does not come before you without having had some experience in the treatment of naupathia. He has, in fact, made it the object of special research during the last two years, and the voyages he has made amount to nearly 60,000 miles of ocean, made upon French steamers plying between France and South America, between Belgium and the United States, and between France and the United States. He was the medical officer on board these ships, and in that capacity he has come into direct relation with more than 2,500 passengers.

With the object of discovering, if possible, the nature of sea-sickness, I have carefully examined all observable symptoms in this affection, and have found many which had not before been observed. Let us, then, enumerate these symptoms, which, when intelligently interpreted, will, I am convinced, lead to the true understanding of this hitherto mysterious affection.

We will suppose an otherwise perfectly healthy person suffering from a complete attack of sea-sickness. The nervous system yields the following symptoms: Great prostration, indisposition to make the least effort, vertigo, intense frontal or temporal cephalalgia, insupportable sensation of uneasiness, weakness and discomfort, sometimes causing the patient to groan continually; and finally, insomnia which may extend over a period of several days. All the modalities of reflex action are preserved intact. One important symptom remains, myosis, which is often observed in these cases. This symptom is of great importance in the study of the pathogenesis of naupathia, as will be seen a little later. The digestive apparatus

furnishes the most striking and best known phenomena: anorexia, adipsia, paleness and coldness of the lips, salivation, nausea, emesis, gastralgia (which is frequent after three or four days of sickness), and especially constipation. The tongue, liver and spleen are normal in uncomplicated cases. From the circulatory apparatus we have: Diminished force of the cardiac pulsations with consequent abnormal depressibility of the pulse; decrease or increase in the number of cardiac revolutions per minute (constant decrease in men, descending so low as 57, 51, and in one case 45 beats per minute, and decrease in one-half the cases in women; with the latter there is often increase [114 without fever has been observed]; while in children of both sexes there is almost always increase—the maximum I have observed is 120 beats per minutes without fever); the capillary circulation appears diminished, as may be inferred from the coldness of the extremities, ears, lips and nose, and from the extreme paleness of the skin. The muscles composed of unstriped fibres which receive their motor nerves from the great sympathetic system are evidently paretic, as is denoted by the inertia of the intestine and by the myosis. The urine, as is well known, is excreted in exceedingly small quantity. It preserves its normal color, precipitates no sediment, is acid, clear, and free from albumen and glucose. Finally, sea-sickness is an apyretic affection; it has no period of incubation, properly speaking. Its period of invasion is exceedingly variable, being from a few seconds to several hours according to the predisposition of the person concerned.

For all these varied phenomena there is, I think, a simple explanation to be advanced; one which clears away much of the mystery which has hitherto enveloped this peculiar affection, and which points the way to its rational treatment, as the results of the new method show. Sea-sickness ought to be regarded as the expression and result of certain purely functional or dynamic perturbations of the organism, for organic lesions there are none known. *These perturbations can all be referred directly or indirectly to the sympathetic nervous system. Every symptom named above can be explained by invoking a paralysis, or at least a paresis, of this system, and sea-sickness can be cured by those alkaloids which stimulate the great sympathetic and the unstriped muscular fibres to which it is distributed.*

It is really remarkable how this theory harmonizes with the phenomena observed and with the results obtained. The constipation, for instance, must be due to the defective action of the great sympathetic upon the muscular coat of the intestines; the myosis, as is well known, to its defective action upon the radiated fibres of the iris; the slowness and weakness of the heart's action to defective action of the cervical portion upon the intracardiac motor ganglia (as Brücke, of Vi-

enna, and others have shown).<sup>1</sup> Finally, general paresis of the great sympathetic admirably explains the lowering of the blood-pressure which is undoubtedly present in this affection, for Cl. Bernard, Vulpian and Brücke have proved that this nerve regulates the tonus of the arterial system through its action on the muscular tunic of the arteries.

This diminution of the pressure of the blood is, to my mind, the key to the enigma of sea-sickness. But upon what grounds may we admit the existence of this condition? The following considerations will help elucidate the question: The lowering of the blood-pressure is indicated by the scantiness of the urine, by the abnormal depressibility of the pulse, by the coldness of the extremities, by the extraordinary pallor of the skin, and by the indubitable signs of acute cerebral anæmia (prostration, apathy, vertigo, cephalalgia and insomnia). The symptoms of nausea and vomiting are generally attributed to anæmia of the medulla oblongata which is due, most probably, to the general lowering of the arterial tension. There is, moreover, an additional evidence of the verity of this hypothesis. I have demonstrated by actual manometric experiments upon the lower animals that the alkaloids employed in the new method of treatment which I propose, and which cures sea-sickness, really possess the property of raising the blood-pressure. The results of these experiments were published in the *Bulletin général de Thérapeutique*, July 15, 1886. It would seem, therefore, that one was fully authorized to admit that the pressure of the blood is lowered in this affection. If this conception of the nature and immediate cause of sea-sickness be correct, you may already perceive which important class of agents ought theoretically to cure it. It is that great class called cardio-vascular tonics and some of the substances of the class of neuro-muscular agents that ought, *à priori*, to act as specifics in naupathia. We will see in a few moments later how admirably these agents operate.

The question now arises, "But what is the cause of the paresis of the great sympathetic that produces the lowering of the blood-pressure?" The cause of the paresis of the sympathetic is, doubtless, what Bidder has named *reflex inhibition*, which may have its origin either in the sensorium (the centre for vision and olfaction) or in the terminal nerves of the abdominal organs. It is undeniable that these organs are slightly displaced and contused by the movements (sometimes violent) of the pitching and rolling ship, and thus the terminal ramifications of the sympathetic nerve distributed to these organs excited, thereby constituting the origin of the reflex action in question. In fact, in a recent communication to the Société de Biologie of Paris, M. Dastre, the

successor of Paul Bert to the chair of physiology of the Sorbonne, demonstrated the displacements of these organs by citing experiments made in his laboratory upon the lower animals.

In sum, this is the chain of influences that produce sea-sickness according to this theory: Excitation of the nervous extremities in the abdominal viscera produced by the movements of the ship, or excitation of the senses of vision and olfaction, or of both, causing by reflex action a suspension of the motor functions of the great sympathetic which in turn results in this general lowering of the blood-pressure with all its attendant symptoms. (Chapter on Diagnosis omitted.)

The theory thus passed, let us turn to the practical fact of the prompt cure of naupathia in the vast majority of uncomplicated cases, and to the details of the new method of treatment here proposed. This method is based upon 87 written observations, taken mostly upon transatlantic steamers, and it would seem, from my experience, that the sicker the patient was the more surely he would be cured.

The medicinal substances employed are atropin, strychnine, caffeine, sparteine and hyoscyamine; atropin and hyoscyamine are administered in conjunction with strychnine, the others alone. All these substances are not given to the same patient, but constitute as many varieties of treatment. Sea-sickness is cured either by atropin associated with strychnine or by caffeine held in concentrated solution by salicylate or benzoate of sodium, or by sparteine.

These substances are all administered by hypodermic injection. This mode of administration was chosen for the following reasons: The frequent vomiting in sea-sickness, by which the agents employed would be thrown out and lost; the difficulty of their absorption from the stomach in this affection, and also the retaining and destructive action of the liver upon these alkaloids when absorbed from the gastro-intestinal tract, as Hegar, Schiff, Lautenbach and others have amply shown.

First, as regards atropin and strychnine, I would remark that the dose for adults of these two agents, given subcutaneously in well-marked cases of sea-sickness, is 1 milligram (.001 grm.) of each (about  $\frac{1}{80}$  of a grain). The following is the formula I have employed thus far:

R. Atropin sulph. . . . .  
Strychnin sulph. aa. . . . . .04 grams.  
Aq. menth. pip. . . . . .40 "

A gram of this solution contains a milligram of each of the alkaloid salts. Although these eminently active substances have been administered in sea-sickness a great number of times during the last two years, no injurious effect therefrom has been observed. If, after the space of two hours from the time of the first injection, the patient is not cured, a second injection of 1 gram of the

<sup>1</sup> When there is increase in the number of pulsations it ought to be attributed to a coexisting paresis of the pneumogastric.

solution must be injected, but it would be imprudent to repeat this dose of atropin too frequently.

Children and adolescents are very susceptible to this medication. A little girl of  $2\frac{1}{2}$  years, sick during fourteen hours, was promptly and definitely cured by the injection of one-sixth of a full dose, *i. e.*, by about .00016 grm. of atropin and as much of strychnine (about  $\frac{1}{420}$  grain of these substances). A boy of 6 was cured by  $\frac{1}{4}$  of a gram of the mixture.

The effects of this medication are often surprising. In the majority of cases of simple naupathia *the patients entirely cease vomiting immediately after receiving a single injection of 1 gram of this solution.* A little later they feel no more nausea, headache, or vertigo. More than this could hardly be demanded of any remedy. Sometimes two injections are necessary to produce complete exemption from all unpleasant sensations. The sufferer ceases groaning, color comes back to his cheeks, he affirms that he feels "much better," or that he suffers no more at all. Almost always he falls asleep shortly after receiving the injection and remains sleeping one-half or three-quarters of an hour. If given late in the evening the injection insures a refreshing night's sleep for which the patient is very grateful.

One of the best evidences of the efficacy and innocuity of this method is the fact that the patients often ask for a repetition of the treatment, and mothers who have been treated desire it applied to their children.

As regards caffeine I have experimented with it thus far in adults only. The following is the formula for the solution employed:

R. Caffeine pur. . . . . 4 grams.  
Sodii salicyl. . . . . 3 "  
Aq. destill. q. s. ad. . . . . 10 cc.  
Dissolve by gently heating.

Each cubic centimeter contains .40 grm. of caffeine. A single dose of .30 grm. injected under the cutis completely cured in seven hours a patient who had been suffering intensely from sea-sickness during three days. Another patient in the same condition was cured in five hours. Both had remained in bed and had eaten nothing during the whole period of their sickness, but on the evening of the day of the injection they both went to dinner and remained well.

Certain *disadvantages* of the method exist, but are not of great importance. Dryness of the throat is sometimes caused by the atropin; young children may present an intense redness of the skin which alarms their parents and which is also due to the atropin, and the amblyopia caused by the alkaloid is occasionally observed in adults. Exceptionally the seat of the injection is slightly painful, especially in nervous individuals, and once troublesome inflammatory symptoms were caused by one injection under the skin of the outer border of the forearm, which subsided spon-

taneously, however, in the course of two days. I have never observed either abscess or phlegmon as a result of this mode of treatment. None of these phenomena have more than a few hours duration and I have never noticed any injurious effects therefrom.

If this method, conscientiously employed, produces no favorable effect upon a person affected with naupathia, who has not exceeded the age of adult life, it is almost certain that the failure is due to an organic lesion in some part of the circulatory apparatus, especially in the valves of the heart. A patient having well-marked mitral insufficiency received three injections in the space of six hours, each containing 1 millig. of atropin and 1 millig. of strychnine, without the slightest favorable result, the only change in the symptoms being an increase in the number (but not in the force) of the cardiac pulsations. It is well to remark, that if these injections produced no amelioration in this case they did not, on the other hand, occasion any aggravation.

This method has not yet been employed as a means of prophylaxis in sea-sickness. The two alkaloids exhibited in the form of pills, however, have successfully warded off this affection when taken immediately upon feeling the first approach of the nausea, and caffeine and atropin have also produced marked amelioration when administered together in the pill form.

Still other substances of the great classes mentioned above have cured sea-sickness in my hands. The sulphate of sparteine, which Professor Germain Sée has introduced into pharmacology as a cardiac agent, also produces speedy recovery. The formula I employ is as follows: Spartein. sulph. .40 grm., aq. menth. pip. 20 grms. Each cc. contains .02 gr., which is a common dose. The benefit after administration has been constant.

Another alkaloid—hyoscyamine, so nearly related to atropin, also cures sea-sickness when combined with strychnine. Formula: Hyocyanin. pur. cryst. .02 grm., strychnin. sulph. .02 grm., aq. menth. pip. 20 grms. Each cc. contains 1 millig. of each alkaloid.

Having thus exposed to your indulgent attention my own personal researches in this direction, allow me to briefly sum up the useful methods of treatment that others have imagined.

The means of prophylaxis are of two kinds, mechanical and pharmaceutical. Of the mechanical means the most useful is the abdominal supporter, a large bandage-like appliance covering nearly the totality of the surface of the abdomen and drawn up tightly enough to prevent much displacement of the abdominal viscera by the movements of the boat.

The choice of the steamer one sails upon is not indifferent. The larger the ship the less movement it has. In all cases one should seek a position as near as possible to the center of gravity of

the ship, for there the rolling and pitching is felt at its minimum. Further, it is well known that complete decubitus is the best of all positions, both to prevent sea-sickness from coming on and to aid its cure. One should lie in a horizontal position with the head on the same level as the body.

The *pharmaceutical means* for prophylaxis which are of real efficacy are few. Alcohol, liquors and wines are sometimes beneficial, but they are uncertain. Certain aromatic substances have been recommended, especially peppermint and its preparations. More potent, however, are the three following: chloral, cocaine, and antipyrin, the two latter being also used to cure the affection when once developed. These substances, like morphine, which has also been used, all act by diminishing the reflex power of the nervous centers, and we have seen above that the reflex action induced by the irritation of the extremities of the nerves of the abdominal organs is the starting point of sea-sickness.

As regards the *curative treatment* of naupathia little satisfaction has been obtained from the *materia medica* until quite recently. Some years ago, M. LeConiat, of the French Transatlantique Line, treated his patients by faradization of the epigastric and hypochondriac regions, aided by an external application to the gastric region of a solution of atropin (0.05 to 30 grm.). He affirmed having obtained good results from this treatment. More recently cocaine has been given and, I believe, with a certain success. Doses as high as 0.30 grm. have been given by Regnault, of Paris, but I esteem that quantity eminently dangerous. The latest remedy that has come to my knowledge is antipyrin. It is certainly very useful in those cases in which the patient *has not yet vomited*, but like all medicines given by the mouth in sea-sickness, it is little or no use after vomiting has once begun. The hypodermic method is then the only one that is sure, safe, easy and efficacious.

I also have tried these other remedies but I find none so effective as those used in my own researches. Allow me to cite two or three short observations by which the working of these agents may be judged.

#### OBSERVATIONS.

*Caffeine.*—Mrs. L., æt. 21, embarked at Bordeaux for New Orleans, Aug. 14, 1886. Aug. 17: The patient has been sea-sick ever since the departure from Bordeaux, three days ago. She has not left her bed during that time, and has eaten nothing. At 9.30 A.M. the following symptoms were observed: great prostration, intense frontal headache, gastralgia. Pulse 114 per minute, small and feeble. Rectal temperature 37.6° C. (about 99.5° F.).

Treatment. Subcutaneous injection of three-fourths of a cubic centimeter of the following

solution: caffeine 4 grams, salicylate of sodium 3 grams, water q. s. to make 10 cubic cm.; *i. e.*, a dose of .30 gram only of caffeine was employed. At 10 o'clock the pulse was down to 78 per minute, and was fuller. Patient feels better. At 11.40 pulse 75, and stronger; patient feels still better; suffers no more from cephalalgia nor from gastralgia. Rectal temperature 37.3° C. 4.30 P.M., pulse 90, and strong. Patient feels herself entirely well, although somewhat weak from abstinence. At the hour of the evening meal she ate with the other passengers and was not sick any more during the voyage.

*Atropin and Strychnine.*—I. Mrs. W., æt. 30, left Montevideo for Havre April 28, 1886. She had travelled by water and was always very sick. The next morning after the departure she was very sick while still in bed before attempting to get up. She presented abundant mucus vomiting at very frequent intervals, constipation, frontal cephalalgia, and moderate prostration; pulse 65, feeble. At 8.35 a subcutaneous injection of 1 gram of the following solution was given: atropin sulph. .04 grm., strychnine sulph. .04 grm., aq. menth. pip. 40 grms., *i. e.*, a dose of one milligram of each of the two alkaloids was injected. At 9 o'clock, *i. e.*, 25 minutes later, *she got up and felt no more nausea*. She felt herself well; the face was no longer pale as before, and there was no more headache nor prostration. 6.30 P.M., the amelioration has continued. She has dined very well and manifests no more symptoms of sea-sickness.

2. Paula X., a young negress, æt. 8, native of the Island of St. Vincent, one of the Cape Verde Islands, was one of our passengers to Buenos Ayres. She commenced to be sick as soon as she came aboard, and was terribly sick every day, so that she could keep absolutely no aliments upon her stomach. She lay down almost the whole time, vomiting at frequent intervals. This state of things continued during *six days* without her receiving any treatment, and by that time she had become so thin and feeble that the captain, to whom she was given in charge, became alarmed about her and asked me to apply my method of treatment. At 10 o'clock on the sixth day I gave her a hypodermic injection of one-third of a cubic centimeter of the solution of atropin and strychnine, *i. e.*, about .0003 grm. (or about  $\frac{1}{3000}$  gr.) of each of these alkaloids. Three-quarters of an hour afterwards she ate and drank with great appetite. She kept everything upon her stomach, and from that moment she felt no longer sea-sick, but on the contrary she ate well and soon began to play. This is one of the most striking examples of cure that I have seen.

In conclusion, be our theory of the nature of naupathia as it may, the practical empirical fact remains, that this affection, once developed, is rapidly curable in the majority of cases; that the

judicious employment of the new method never produces serious accidents; that the method sometimes fails on account of some lesion of the heart vessels or nerves; but that *in simple sea-sickness it always produces amelioration, and generally a prompt cure of this affection.*

## REPORT OF A CASE OF CEREBRAL CYST. RECOVERY.

*Read in the Section on Surgery and Anatomy, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

BY J. F. PEYTON, M.D.,  
OF STANFORD, KY.

Common experience, as well as the literature of surgery, teaches that wounds involving the brain heal readily when secondary inflammation does not take place, and because of the risk in this direction a prognosis must always be unfavorable, though many cases are on record after wound of this organ in which there was full recovery.

From punctured fractures of the skull involving the dura mater there is equal danger, because the dura is very sensitive and the projecting spiculæ irritate the brain at its every pulsation, and from this source there is inflammation of the meninges and death as a consequence. The surgeon usually makes as early efforts as possible for the removal of this foreign body, knowing the longer it remains the greater is the danger from the inflammation spreading along the cellular tissue which surrounds the branches of the meningeal arteries, and by this means reaching the base of the skull.

When meningitis ensues from a traumatism, with suppuration as a result, the hope of the patient is by letting out the imprisoned matter; and where those rare pathological entities, cysts, communicate with the cranial cavity, the operation of trephining is imperatively demanded, as in the case operated on by myself, and which, with your permission, I will briefly report.

John Proctor, of Mt. Vernon, Ky., æt. 22, received a blow upon the left side of the head in 1880, which produced a punctured fracture of the parietal bone—unconsciousness quickly ensued. Elevation of the depressed bone, by Drs. Brown and McKee, of that place, was next undertaken, for prudential reasons, till the end of the third day. This event was not followed by anything unusual, and after the lapse of eight more days the mind became clear and he progressed to apparent recovery without an untoward symptom. Three years passed, when he was seized with an epileptic convulsion, the seizures alternating as to frequency and severity. His attending physician desiring a consultation, I was called about the middle of October, 1884. We agreed as to depressed bone, the depression being one inch posterior to the coronal suture and the same distance from the mesial line in the temporal bone on the

left side. Trephining was at once done. The button removed was three-fourths of an inch in diameter, and from the center of this there projected a spicula one-fourth of an inch in length, and sharp, from the inner table. The brain tissues were firmly attached around the base and the anterior portion of this spicula, and with difficulty it was detached by the handle of the scalpel.

The appearance of the underlying tissues was granular, or cell-like, and highly vascular. The wound was dressed in the usual way, there was no recurring inflammatory symptoms and in a few days it was healed. He had no convulsion for six weeks, but at the beginning of the seventh he played a game of base-ball, the fit occurring on the grounds.

The convulsions having got a start, took place with regularity up to the time of the last operation (of which I will now speak), Feb. 11, 1888. Right well nourished and his functions generally in good shape, in consultation with Dr. A. W. Johnstone, of Danville, Ky., we concluded to do another trephining, and the second button was removed. An incision was made through the dura and the pia mater, when there was revealed a cyst as large as a guinea egg, and whose walls were almost transparent, with a congerie of small vessels traversing it in divers directions. By hooking the cyst with a tenaculum and making an incision through the cyst wall, a half-ounce of clear fluid escaped, the last to come being tinged with blood. The skin flap was in the shape of a horse-shoe, in consequence of the scars or cicatrices made by previous operations. Three drainage tubes were placed in the wound, an opening made in the center, immediately over the incision of cyst, and one tube included in the button-hole, but not extending through the membranes, nor into the cyst, by which device direct drainage was made. The other two tubes were passed through the same opening and were brought out at the upper and lower angles of the flap wound. There were no antiseptic solutions or precautions employed in the treatment of the case. Cleanliness and pure water were our weapons, and he got along beautifully till the close of the third day, at which time he had a fever of 105° F., his pulse was 140, respiration 45, the right arm paralyzed, and a stupor amounting almost to coma, which made the prognosis doubtful. The flap was at once reopened, the wound thoroughly douched in cold water, the drainage tubes well washed and replaced, and without further medication, in six hours the temperature fell to 100° F., the breathing became normal, the pulse 90 per minute, the mind clear, a desire for food, and the danger was passed. From the angles of the wound the tubes were removed on the fourth day, but the direct tube remained in its place till the evening of the eighth, at which time it was removed, though the discharge continued, more or less profuse, for



about three weeks. The result so far has been all that we could wish or hope for. He has had but one slight convulsion since the operation, which was on the night following this event. The mind and memory seem intact, his health is good, and at present he is following his daily vocation.

## MEDICAL PROGRESS.

**HYDATID CYST OF THE ORBIT.**—At the Ophthalmological Society of London, December 13, 1888, DR. ROCKLIFFE brought forward a case of suppurating hydatid cyst of the orbit. The patient, a laborer aged 33, had first noticed an affection of the sight of the left eye in 1882. He had several attacks of inflammation in it, and the vision gradually deteriorated till, in April, 1887, he was quite blind with it. There was then marked protrusion, some ptosis, and the action of all the ocular muscles, except the external rectus, was very limited. Nothing definite was made out as to the condition of the orbit. Eighteen months later, having had more attacks of pain, the patient consented to an operation. An exploratory puncture with a scalpel having given no results, the orbit was more freely opened up and, the eye being removed, a suppurating hydatid cyst was found at the apex of the orbit. The rarity of the affection and the difficulties of diagnosis were briefly alluded to. MR. BRAILEY asked if there were hydatids in other parts of the body. In one case he had seen it would have been impossible to have made the diagnosis if the bosses caused by the development of hepatic hydatids could not have been felt. He thought that in Dr. Rockliffe's case the hydatid had developed in the substance of one of the ocular muscles. MR. HULKE had only seen three or four cases, and he thought an absolutely certain diagnosis could not be made. In one of these cases there had been suppuration. He did not see how suppuration could be caused by rupture of a daughter cyst. DR. ROCKLIFFE, in reply, said that the patient attributed the suppuration to a blow with a piece of iron. No hydatids could be found elsewhere. He thought it had developed behind the eye, and not attached to the muscles, for the patient had free movement in every direction.—*Lancet*, December 29, 1888.

**HYGIENE OF THE EYES.**—DR. LINCOLN, of Boston, in *The Annals of Hygiene*, formulates the following rules to be observed in the care of the eyes for school work :

1. A comfortable temperature, and especially let the feet be warm and dry.
2. Good ventilation.
3. Clothing at the neck loose ; the same as regards the rest of the body.
4. Posture erect ; never read lying down or stooping.

5. Little study before breakfast or directly after a hearty meal ; none at all at twilight or late at night.

6. Great caution about study after recovery from fevers.

7. Light abundant, but not dazzling.

8. Sun not shining on desk or on objects in front of the scholar.

9. Light coming from the left hand, or left and rear, under some circumstances from in front.

10. The book held at right angles to the line of sight, or nearly so.

11. Frequently rest by looking up.

12. Distance of book from eye about fifteen inches.

### UMBILICAL HEMORRHAGE IN THE NEWBORN.

—DR. OTTO TRASS has reported a case, with some general remarks on the condition which produces it, in the *Berliner Klinische Wochenschrift*. Dr. Trass divides the cases into either spontaneous or traumatic; those produced by rupture of the cord, etc. In the latter case the hemorrhage easily ceases by the application of persulphate of iron and firm compression, but it is far otherwise with the cases of spontaneous umbilical hemorrhage. This affection is usually fatal with the newborn. From its analogy to scurvy and hemophilia he proposes the term "omphalorrhagia of the newborn." Out of 336 cases which Dr. Trass has found of record, there were only 3 where the hemorrhage spontaneously ceased, and the recoveries were only 32 per cent. That is to say, more than two-thirds of the cases have proved fatal.

Dr. Trass has concluded that the best means of treatment of these cases is to pass a threaded needle through the skin around the whole umbilicus and ligate it in mass.

### A NEW USE FOR ETHER DURING ANÆSTHESIA.

—DR. H. A. HARE (*University Medical Magazine*, November, 1888), calls attention to the fact that very frequently during the early stages of the administration of an anæsthetic the patient "forgets to breathe," even before the ability to perceive peripheral irritation is lost. Even later in anæsthesia, when the breathing suddenly ceases, we are accustomed to use cold water externally and to slap the patient with wet towels. Such measures are generally called for hurriedly, and it is not at all uncommon for an exasperating delay to occur before the water arrives. The ether is always at hand, however, and I have found that in a large number of instances, both in man and in the lower animals, the free use of ether poured upon the belly causes so great a shock by the cold produced by its evaporation as to cause a very deep inspiration, which is often followed by the normal respiratory movements. This is, of course, a simple procedure, and one which has probably been used by others, but I have never seen it so employed.—*Coll. and Clin. Record*.



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SATURDAY, JANUARY 19, 1889.

THE YELLOW FEVER GERM.

The discussion on the yellow fever germ question bids fair to become acrimonious between Drs. FREIRE and GIBIER. DR. FREIRE so far has the last word, and in his reply to GIBIER he makes certain statements that must be somewhat embarrassing. FREIRE thinks it a little strange that GIBIER, who wrote to the *Academie des Sciences* on the 13th of February that it had not been possible to find the micro-organisms, either in the urine or the blood, should now claim to have found it in the alimentary tract. FREIRE opposes to the denials of M. GIBIER several authors who, with himself, claim to have isolated the microbe of yellow fever. He names REBOURGEO, and in Havana FINLAY and DELGADO; from the island of Salut (French Guiana) he adduces the testimony of DR. RANGE, whose experiments were published in the *Annales des Médecine Navales*, and he also quotes from a private letter from M. RANGE, who wrote him: "I have preserved many microscopic preparations of the poisonous liquid, cultures of the microbes, the blood, black vomit and pieces of different organs," and in describing the effects of his inoculation on animals he says: The "microscopical lesions which I have constantly found are in great part those which you have described in your work, and the inoculations of the cultures made on these animals have been in my hands, as in yours, productive of the same results." Having thus fortified himself by the corroborative experiments of M. RANGE, who, by the way, is a

medical officer of the French Navy, he brings forward the corroborative experiments of M. MAUREL, also an officer of the French Navy, who asserts positively having found a certain micro-organism in the blood of persons suffering from yellow fever. He also notes that both FINLAY and DELGADO made their observations from the same locality at the same time GIBIER reported adversely on the FREIRE claim. He further points out that CAPTAIN and CHARRIN found the micrococcus in 1884, that M. BABES found the micrococci in the tissues of the liver and of the kidneys of persons dead of yellow fever, and that M. GIRERD, the surgeon-in-chief of the Panama hospital, found the micrococci, with which he produced death in guinea pigs by inoculation.

M. FREIRE in his pamphlet pictures his micrococci, and so far as pictures go, the micrococci are the same when procured from the blood and from the black vomit, but it must be admitted the plates are diagrams only, as the objective power is not given with them, nor anywhere stated in the text.

FRANK BILLINGS who in the Nebraska laboratory has been making careful searches in the tissues of organs from yellow fever patients procured for him in Havana, has examined the "Reeve's germ," and pronounces it the same he previously described as found in the Southern Cattle Plague, the identical germ originally described by BABES as being seen by him in material sent by LACERDA from Brazil.<sup>1</sup>

It now looks as if FREIRE was coming out first best after all, and surely no honor can be too great for him who can silence opposition by producing a microbe whose presence is constant, and can always be recognized by the use of the same methods. But no matter who shall establish his own claim, he must not expect to do so without meeting doubt, inquiry and perhaps injustice at first, and he must be prepared to meet it in good temper. Men are not usually allowed to shuffle the cards and cut them too.

The new quarantine authorized to be established by the Act of August 1, 1888, near Key West, Fla., will be on the Tortugas Keys, about sixty miles west of Key West in the Gulf of Mexico. It is contemplated by the Marine-

<sup>1</sup> Dr. Sternberg's opinion as set forth in an interview is elsewhere given in this issue.

Hospital Service to have a laboratory specially fitted up for the study of yellow fever, at the new Station. There are several islands at these Keys, and the laboratory can be easily isolated. Systematic and continuous research, will surely either corroborate the alleged discoveries of former investigators or make original discoveries. At any rate the attempt will be made.

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THE SO-CALLED "CHRISTIAN SCIENCE."

"Animus tamen omnia vincet.

"Ille etiam vires corpus habere facit."—OVID.

One of those members of the Association from whom the Editor always likes to hear, for he is an enthusiast on the subject of increasing the membership, and takes interest enough to write now and then, his views on current medical topics, and to touch up certain enthusiasts *currente calamo*, writes us to urge an immediate raid on that misguided class of citizens known as "Christian Scientists."

But with all respect to our correspondent we do not think anything in professional experience in dealing with the insane would justify us in making an attack. Persons afflicted with mental maladies of that sort are to be treated with great sympathy, for like all persons acting under delusional impulses and hallucinations, they have the most profound conviction that they are right.

It is customary in certain interested quarters to speak of the origin of homeopathy as a natural protest against the polypharmacy of the age in which it was invented, and so far not an unmixed evil, but in fact it originated in the well-known opinion that a certain proportion of diseases if let alone get well of themselves. The notion that the "mind produces all the mischiefs of the body" is as old as Plato, and some of the ancients have left on record a tirade against the soul. DEMOCRITUS urged that *Damnatum iri animam a corpore*, and CYPRIAN said, "if the body should in its behalf bring an action against the soul, surely the soul would be cast and convicted, that by her supine negligence had caused such inconveniences, having authority over the body, using it for an instrument as a smith uses his hammer." If according to the ancients, the soul could cause bodily ailments, it was not a long leap to the conclusion that the soul or mind by governing the bodies could cure them. Here then we have the source of inspiration of the rule of "similars"—

and in truth it appears that the "Christian Scientists are only carrying out to the extreme limit that truly luminous ray from the similia, one might almost say a will-o-the-wisp floating direct from the ashes of HAHNEMANN.

But there are certain inconveniences attending the faith, that sometimes bring the victims to the eye of the public in a way that is a little startling: thus, the writer knows of a case, where a lady governed by such superstition lay for an entire week suffering from the pain of a fractured thigh, and the irritation from its lack of adjustment, and another case where a man died almost without notice simply because his family persuaded him that "Christian Science," through the medium of a certain practitioner of the art, would shortly cure him, but as a matter of fact it required the coroner to finally settle the nice points of the diagnosis.

The writer has heard a patient while suffering excruciating agonies, from a fractured thigh, told by a true believer in the "science,"—"Now then don't cry, rely on the Saviour, you know you won't have any pain if you only have faith!"

We are told that the blood of the martyrs was the seed of the Church, but we imagine the "Christian Science Church" will not flourish to any very alarming extent on the sufferings of its self-deceived martyrs. They seem to take very kindly to an old fashioned anodyne, after a more or less extended experience of the kind. So that whatever may be expected of the growth of this craze among the believers in the supernatural, the followers of practitioners of infinitesimal dosage and of the thousand-and-one "quips and oddities" that strut their brief period on the professional stage, its practice will be confined to those cases where the disease is itself spirituelle and attenuated. The REVEREND DOCTOR SWING, a well-known theologian, says this hallucination is not a "Christian" one, and all medical men know that it is not scientific, and we may therefore infer, the doctrine being neither Christian nor scientific, that it will be a long day before the practitioners of medicine become like the cross-roads tailor who was forced so hard by his competitors that he "he sewed for nothing and found himself in thread."

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It is a patriotic duty to join the Association at once.

## EDITORIAL NOTES.

DR. SWAN M. BURNETT.—The following paragraph we notice is making a quite extensive tour of the general newspapers:

Mrs. Frances Hodgson Burnett is being handsomely rewarded for her literary work, "Little Lord Fauntleroy" alone bringing her \$60,000 a year. Her husband practices medicine in Washington, and is a quiet man of studious exterior, who entertains a profound respect for his gifted wife.

The paragraph does scant justice to Dr. Burnett, who is one of the leading ophthalmologists of this country. He is also an able writer, a linguist and a gentleman, and altogether a fitting mate for the gifted authoress.

DR. WM. A. HAMMOND'S Sanitarium at Washington, D. C., was formally opened on Jan. 6 with half its rooms filled with patients.

THANKS TO CONTEMPORARIES.—Our thanks are due to those of our contemporaries who have published pleasant notices of the change in the editorial management of THE JOURNAL. So far as the new Editor is concerned, and he feels sure he also expresses the feelings of the late Editor, in returning our grateful thanks, and best wishes for the prosperity of the Editors of those publications. Special reference to them by name is omitted only from the fear of seeming to make too great distinction between so many clever gentlemen and excellent friends. Let us all continue to work with vigor for the increase of membership and power of the Old Association.

PURE CONFECTIONERY.—The following circular signed by fifteen confectioners of New York city, five of Cincinnati, five of Philadelphia, four of Boston, four of Chicago, two of St. Louis, and ten of other cities, has been issued. It is self-explanatory, and argues well for the public spirit of the manufacturers belonging to the Association:

*The National Confectioners' Association of the United States. Its Objects and its Members.*—The National Confectioners' Association was organized at Chicago, Ill., on April 23, 1884. The principal object of this Association is to raise the standard of confectionery, and exclude, so far as possible, adulterated goods. This work has been very successful. Since the first meeting in 1884, through the efforts and backing of the Association, stringent laws have been passed in the States of New York, Massachusetts, Ohio, Tennessee, Michigan and Pennsylvania.

The Association, at its Third Annual Meeting, held at the Burnett House, Cincinnati, May 12, 1886, indorsed the following resolution:

"This Association hereby offers a reward of one hundred dollars for evidence that will enable them to convict any person of adulterating confectionery with poisonous

or injurious substances—the Association assuming the cost and responsibility of prosecuting the offender."

Notwithstanding this reward and the vigilance of the committee, not a single case of injurious adulteration has been presented, which is strong proof of the almost complete extinction of mineral adulteration. Nevertheless, we desire the coöperation of the boards of health throughout the country, and earnestly request that any case of supposed adulteration that may come under their notice be reported to the Secretary, Martin Dawson, Chicago, Ill.

The Association feels well pleased with the result of their labors during the past five years, and are confident that their future work will redound to the benefit of the public and all legitimate manufacturers of confectionery.

We are also satisfied that no class of manufactured goods offered for public consumption are so entirely free from adulteration as confectionery.

THE BRITISH MEDICAL ASSOCIATION now has about 15,000 members of whom 543 are foreigners. Of the foreign members 65 reside in the United States.

OBITUARY.—DR. H. O. HITCHCOCK<sup>1</sup> died at his home in Kalamazoo, Mich., Dec. 7, 1888, æt. 61 years. For many months he had been gradually failing, so that his death was not a shock to his friends. He graduated at Dartmouth College in 1851, and in medicine at the College of Physicians and Surgeons of N. Y. in 1855. After spending some time in Bellevue Hospital he removed to Kalamazoo, Mich., and continued in active service till failing health prevented. Dr. Hitchcock had served as President of the Michigan State Medical Society, and was a member of numerous other medical organizations. He will especially be remembered by the people and the profession of the State for his active efforts in the establishment of the Michigan State Board of Health, and for his arduous labors in its behalf for several years thereafter. We shall all miss his genial face, his hearty pressure of the hand, the genial smile of warm friendship, and the eloquent advocate of justice and progress, as we gather this year at the State Society, or at the American Medical Association. Who will take up and carry on his work?—*American Lancet*.

SURGEON-GENERAL STEWART of the British Army Medical Department, died Dec. 5, 1888. He received his first commission in 1841, and served with the 29th Regiment throughout the Punjab campaign of 1848-49, including the passage of Chenab and the battles of Chillianwallah and Goojerat. The deceased officer was an ardent botanist and ornithologist, and was enabled during a long residence in India to make several valuable collections of skins and birds, which he gave to various museums at home and abroad. He was a member of the Council of the Zoological Society of London from 1885 till his death.—*British Medical Journal*.

<sup>1</sup> Dr. Hitchcock joined the American Medical Association in 1863.

## SOCIETY PROCEEDINGS.

Suffolk District Medical Society.

## SURGICAL SECTION.

*Stated Meeting, Nov. 7, 1888*THE PRESIDENT, JOHN COLLINS WARREN, M.D.,  
IN THE CHAIR.

DR. ROYAL WHITMAN read

A CASE OF MACEWEN'S OPERATION (FOR THE  
RADICAL CURE OF HERNIA) IN A GIRL, RE-  
SULTING IN THE CURE OF HABITUAL  
INCONTINENCE OF URINE.

The patient, a girl æt. 11, was brought to him last spring on account of antero-posterior curve of the spine. Besides, she had a right inguinal hernia about the size of a small lemon, and there had been habitual incontinence of urine. On April 9, 1888, Macewen's operation was performed. The patient was about as usual on the eighteenth day without support, complete control of the urine having been established. Since then she has improved both mentally and physically.

DR. HAYWARD W. CUSHING presented

AN IMPROVED METHOD FOR THE RADICAL CURE  
OF FEMORAL HERNIA.

The patient was a boy, æt. 12 years, and the hernia was of four years' duration. Operation May 14, 1888. A straight incision from Poupart's ligament over the crural ring to just below the saphenous opening, dividing the superficial structures, exposed the sac, which was found to contain omentum. The sac was adherent to the upper part of the saphenous opening. The incision was prolonged parallel to and a half inch above Poupart's ligament, and by dissection the sac was exposed, and could be freed until it became perfectly reducible. It was opened and the omental mass was ligated and cut away. A continuous suture closed the sac, which was folded on itself and fixed within the abdomen à la Macewen. The crural ring was next closed by suturing Poupart's ligament with a quilted suture to the pubic portion of the fascia lata and the fascia covering the pectineus muscle, the femoral vein being protected with a retractor. When secured, the opening apparently became invulnerable, the folded sac forming a pad, which was firmly fixed against the internal opening of the crural canal, while the suture tightly closed the external aperture. The pubic and iliac portions of the fascia lata, forming the margins of the saphenous opening, were next sutured in a manner similar to that by which Macewen causes the external pillar to overlap the conjoined tendon in the inguinal operation. Operation wound closed; no drainage; aseptic dressings.

The patient remained in bed two weeks, and on the twentieth day after the operation the wound was dressed for the first time. A narrow red line alone marked the seat of the operation, and the dressing was dry. An indurated mass could be felt just above Poupart's ligament, at the point where the sac had been secured. No tenderness. For the next four or five weeks a pad and bandage was worn, but its value is doubtful. This method combines the advantages of Macewen's pad with the additional security of an effective closure of the superficial structures.

DR. HERBERT L. BURRELL read a paper on

A FEW POINTS IN MACEWEN'S OPERATION FOR  
THE RADICAL CURE OF HERNIA.

He had operated in eight cases, all of which had been successful so far as heard from. In two of them scrotal abscesses formed. In the others union was by first intention. They have been in adults and in children; complicated and simple. As to permanency of cure, a sufficient time has not elapsed to be sure. Personally, he felt that at least three, and better, five years, should have elapsed. The operation is an attempt to restore the inguinal canal to its normal condition, and then the placing of an intra-abdominal pad in apposition with the internal surface of the internal ring. It is distinctly and strictly an operation devised and applicable to oblique inguinal hernia. As applied to femoral hernia the operation is incomplete, in that it does not close the crural canal. Dr. Cushing's operation fills this gap.

The intrinsic difficulty in closing a hernial opening is the preservation of the cord and its accompanying vessels; and previous to Macewen's operation he had come to the belief that the only satisfactory way of absolutely closing the hernial canal would be to enucleate the cord and testicle, and close the inguinal canal by a direct attack upon its intra-abdominal surface. This operation he once performed on a priest, but on account of the necessary mutilation it is not applicable to the ordinary patient.

The indications which had governed him in advising Macewen's operation have been: uncontrollable by truss hernia; painful truss hernia; and in one case he operated where there was great mental depression associated with the hernia.

The following points of importance have suggested themselves to my mind as bearing on the technique of the operation: a, the finding of the sac; b, the isolation of the sac; c, the troublesome hemorrhage and manipulation of the tissues; d, the introduction of the sutures; e, the dressing; f, the question of wearing a truss.

a. The finding of the sac. The strictest anti-septic precautions have been attempted. An incision of 2 or 2½ inches is made directly over the extreme ring, great care being exercised to bring the incision directly over the middle of the loz-

enge-shaped opening and running in its direction. The wound is deepened until he met a rather thick white layer, which, on being divided, showed that he had entered a cavity, when he knew that the sac had been reached. He never attempted to isolate the sac without opening it; for the recognition of the cavity is the distinguishing point. Therefore the whole attention of the surgeon from the time he makes the primary incision should be devoted to the finding of the sac. This saves time. If he cannot readily find the sac he allows the patient to partially recover from the ether and the sac is quickly distended.

b. The isolation of the sac. Once in the sac he prepares it for restoration to the abdominal cavity. When adherent, he fills the sac, through the small opening, with iodoform gauze, and thus distended there is no difficulty in dissecting it from the cord and the adjacent vessels. When, however, the sac is filled with omentum, congenital cases directly on or about the testicle, one has a difficult, tedious dissection to carefully separate it from the testicle and return it to the abdominal cavity. Occasionally he has had to divide the omentum into various parts and return the carefully secured ends to the peritoneal cavity.

c. The troublesome hemorrhage and the manipulation of the tissues, both of which may be avoided by the packing of the sac with iodoform gauze.

d. The introduction of the sutures. This is one of the most difficult points in the whole operation, and he has found that he could place them most accurately by a Hagedorn needle in a good holder. After carefully separating the sac the whole length of the inguinal canal and for half an inch around the intra-abdominal surface of the internal ring, he placed a stitch in the very extremity of the sac and transfixed it through and through and brought it out, after traversing the inguinal canal, through the muscles of the abdomen, pulling up the sac inside the abdomen in much the same way that a Venetian blind is raised. This suture is not fastened in position until the end of the operation, but it is temporarily secured by a pair of pressure forceps. Then he carefully attempts to restore the valve-like form of the inguinal canal by stitching the conjoined tendon with strong silk or stout catgut to the aponeurotic structures of the transversalis, internal and external oblique. He usually places two, if not three sutures in position and, as he ties them, the assistant introduces his finger in the canal to determine how tightly he brings the parts together.

e. The dressing. The operation proper is finished when the inguinal canal has been closed. Lately he had dispensed with drainage, but after a thorough and effective flushing with a solution, 1 to 1,000 corrosive sublimate, the superficial wound is closed with continuous catgut sutures.

The dressing proper consists of six sterilized gauze pads  $6 \times 8 \times \frac{1}{2}$  inches superimposed, covering the wound surface and the scroto-femoral cleft. This is held in place by a carefully applied gauze bandage 4 inches wide, just tight enough to steady the dressing in place. Over this is laid a piece of mackintosh with a hole in it for the penis. This is covered by sterilized sheet wadding. This is secured in position by a cravat gauze bandage, 6 inches wide and long enough to form a double spica bandage. Over this is another piece of mackintosh with a hole in it for the penis. This is secured in position by safety pins as necessary.

f. The question of wearing a truss. There is little doubt that the wearing of an ordinary truss after hernia operation is open to the objection that pressure on cicatricial tissue is usually followed by gradual absorption; but as he does not feel safe with nothing he has adopted the movable truss much as recommended by Pye, which does not exert any undue pressure on the cicatricial tissue.

DR. HENRY O. MARCY: The essentials of his (Dr. Marcy's) operation for the radical cure of hernia consist in the obliteration of the sac by its complete removal and the sewing up of the internal ring. It is necessary to dissect the sac. After opening it, the introduction of the fingers, in his experience, has been sufficient to guide in its dissection and to lift it away from the tissues. He does not care for the rough manipulation of the sac, for the very reason that it is to be removed. When freed up to the internal ring, it is sewed there, at its very base, by the continued double suture of tendon. Then it is cut off near the line of sewing, and the peritoneum is then, as he believes, left thoroughly smooth on its inner surface. There is no depression for the future catching of abdominal contents. The next step is the refreshment of the pillars of the ring. This is then sewed in the same way (double suture). Then he sews down upon the cord with the same suture as far and as carefully as judgment and experience will warrant. Then a third layer in the same way, closing the external deep tissues to make the external ring. Then the superficial tissues are closed with a *blind stitch* which approximates the edges of the wound without a vestige of stitch being in sight. Each step is done under careful antiseptic, and he generally prefers the 1 to 2,000 solution of corrosive sublimate for irrigation. In dressing the skin must be thoroughly dry before collodion will adhere. Dust iodoform with the iodoform blower and seal the wound by covering the parts carefully with iodoform collodion. Incorporate into this a few shreds of absorbent cotton. When dry the dressing is complete. Further external dressings are unnecessary. It is not necessary that the patient should be kept in bed after the first day, rest only of the parts locally being required. This is essential during the processes of repair, as in

all wounds. For several weeks care is to be exerted in the passage of the bowels for any strain. It is better, in the majority of cases, to omit the use of retention or supporting pads, as a truss, unless in very young patients, when Dr. Marcy found a seeming advantage derived from a light support in the use of the water pad truss, first introduced to the profession and sold by Dr. Nathaniel Greene, of the firm of Leach and Greene, of this city.

In illustration of the method Dr. Marcy exhibited a patient with the following interesting history: J. R., æt. 50 years, had suffered for the last six years from a large tumor in the right inguinal and scrotal region, at times entirely incapacitating him from work. On several occasions a considerable quantity of bloody fluid had been evacuated from the tunica vaginalis, always to recur. There remained a large doughy mass in the upper part of the scrotum, presumed to be omentum, at times complicated with symptoms of intestinal obstruction. The diagnosis had never been made positive, although he had been seen by a number of distinguished surgeons, malignant disease having been deemed probable. Operation August 29, 1888. Upon opening the tunica vaginalis, the testis was found diseased, and it, with the tunica, was enucleated and removed. The incision was carried as high as the internal ring, and an omental mass of fist size was freed from its attachment at the internal ring, sewed across with double suture and removed. The stump was returned into the abdominal cavity. The thickened peritoneal sac was dissected free and sewed across at its base in a similar manner. It was resected close to the line of suturing and returned within the internal ring. The cord was ligated, cut short and returned. The widely separated pillars of the internal ring were refreshed. With the finger in the ring a suture of kangaroo tendon was carried through the upper border, and in double continuous suture the pillars of the ring were closely approximated throughout. A second more superficial line of suturing was continued parallel to the first, knotted and cut short. The skin was approximated by a blind stitch, closing the external wound with no suture points appearing through the skin. The incision was sealed without drainage with iodoform collodion, into which was incorporated a few shreds of absorbent cotton. The scrotal wound was also closed in parallel layers by the buried kangaroo tendon suture, with the skin approximated as above described, and treated with an external dressing of iodoform collodion. Immediate union without suppuration followed, or even cedema. Upon exhibition the patient showed a linear cicatrix about 2 inches in length, parallel to Poupart's ligament. There is a firm resisting feel to the touch without impulse or coughing. The patient states that there is no tenderness or soreness, and he feels no discomfort in locomotion.

Dr. Marcy referred briefly to three other cases of cure operated upon since the date of the one exhibited, and also showed three specimens of the resected sac, and the omental contents, which in each case were so altered that its removal seemed advisable. The results in each case were equally satisfactory, and one patient, himself a physician, was allowed to be in an easy chair every day, and at the end of two weeks he took a short walk without discomfort.

Upon question, Dr. Marcy explained the stitch briefly as follows: The needle used is about eight inches in length, including the handle, and curved within an inch of the point to about a right angle. The eye is situated near the point of the needle and is proportionately large. Threaded, it is carried through the tissues to be enclosed, unthreaded, rethreaded with the opposite end of the suture and withdrawn, thus finishing the first stitch. The needle is introduced for the second stitch at a distance from  $\frac{1}{3}$  to  $\frac{1}{4}$  inch from the first, and the suture, in a similar manner, is then carried in double thread from opposite directions through the same opening. Stitches are repeated continuously in as large a number as may be deemed necessary. Without cutting the thread, a reverse line of suturing of the superficial tissues is made, thus closing finely in even continuous seam the suturing as desired. Dr. Marcy has used this suture with excellent results for many years.

DR. D. W. CHEEVER said: The inguinal canal in the male is the weak point. The operation would be easy enough if we could remove the testicle and close the ring. Ambrose Paré used metallic sutures in these cases, something as John Wood did later. I was rather discouraged by the result of Wood's operations which I did a good while ago. The introduction of antiseptic surgery has rendered possible a boldness we could not dream of before and has converted a secret and obscure operation under the skin to one of plain procedure. Wood's operation was to do subcutaneously much as Macewen does. The aim was to get invagination of the sack and to glue to the pillars of the ring by fibrinous adhesions. It was done by means of a wire. In many cases the result was suppuration. A long time ago Dr. J. B. S. Jackson said to him "Doctor you will never get a cure till you can obliterate the serous canal." In femoral hernia there is no serous canal. The cures by Wood's method in his hands were not more than four or five that he was able to trace. Buried sutures with wire he tried, but they were invariably cast out by suppuration. He had seen them remain a long time in tissues which you would suppose to be more irritable, *e. g.*, the larynx after thyrotomy, where he had left in buried sutures that were never thrown out. The operation for femoral hernia is exceedingly difficult by Wood's method. The difficulty is to approximate the walls which are rigid. In seek-



ing to invaginate the cribriform fascia, one practically invaginated nothing at all and forced together tissues which invariably ripped out afterwards under the sharp pressure of the metallic stitch. Dr. Cushing's method seems to complete the link of Macewen's operations, by rendering you able to invaginate, which you cannot do by any external methods about the crural ring. The wonderful safety of present processes of antisepticism in operating on these structures he could not speak too much of, because he saw so much trouble from the old methods—throwing out of sutures, suppuration, etc. He thinks the profession has too much lost sight of Dr. Wood's flat box-wood pad shaped like a horseshoe with one arm longer than the other. Wood's theory I believe correct, that when the cure of hernia depends on the lymph effused in a large plug, that the subsequent failure is due to the absorption of the lymph, and that the absorption is hastened very much by pressure, consequently that all trusses applied after operation are evils, yet he did not feel like giving them up and sought to diminish the pressure by the horseshoe pad.

DR. A. P. CLARKE said he knew Dr. Marcy's method very well. The first case was in 1870, and Dr. Marcy operated for him. It was a strangulated hernia. The patient was seized on Thursday and the following Sunday had stercoraceous vomiting. The operation was then performed with carbolic spray, and the canal was completely obliterated by the catgut sutures. The wound was dressed antiseptically with Lister dressings. The patient lived five years and had no return of the hernia from which she had suffered much for many years. The operation was done with great difficulty for she was subject to asthma and had a violent cough. She eventually died of pneumonia. More recently he saw Dr. Marcy operate on an old man for strangulated hernia. It was reduced after the incision was made. The tendon suture with the double stitch was used to occlude the ring. The cord was not obstructed nor strangulated afterwards, and there were no bad symptoms. The wound was sealed with the collodion dressing.

DR. A. T. CABOT said that last summer he had three cases of femoral hernia: one of radical cure and the others strangulated. In one the sac was in a dark mulberry condition. He did not like to return it and sutured the neck of the sac close to the inside ring and brought it together with several sutures. A few weeks later there was no recurrence. The other cases were done much like Dr. Cushing's method.

DR. RICHARDSON: How long did Dr. Burrell's operation last?

DR. BURRELL: At first about an hour. Now about half an hour.

DR. NATHANIEL GREENE said: The use of trusses after operation is simply a choice of evils.

There is no question but what the pressure of the truss is likely to weaken the cicatricial tissue and if any other device can be arranged that will retain the hernia it will be better. A bandage gives least support when it is most wanted, *e. g.*, when stooping.

DR. J. C. WARREN inquired whether Dr. Green had noticed any difference about people coming for trusses since antiseptic methods have been in vogue in operating for hernia.

DR. GREENE said he thought so. It is hardly time yet to get many cases after Macewen's operation, but it is an operation of which he had great hopes.

DR. M. H. RICHARDSON reported

#### TWO CASES OF LAPAROTOMY FOR EXTRA-UTERINE PREGNANCY.

*Case 1.*—Tubal pregnancy. Rupture during the third week and hemorrhage into the abdominal cavity. Laparotomy. Recovery. This case illustrates the difficulty often met with of making a diagnosis in certain obscure affections of the abdominal cavity, as well as the advantage in such cases of early operative measures.

Mrs. P., *æt.* 37, was in good general health. No catamenial disturbances. Married when 17 years old. Had a miscarriage at the sixth month about a year after marriage, and since then has never been pregnant until present time. Last flow three weeks ago. On Sunday, July 1, having been in usual good health, she was seized suddenly in the night with severe pain in lower abdomen. Some relief the next day and then a return of pain with feeling of faintness, nausea and vomiting. Bowels moved three days before. On entering the hospital she had an expression of anxiety. Temperature 97°; pulse 80 and weak. Abdomen not disturbed. Some dulness on percussion in right iliac region, but no resisting tumor to be felt. On vaginal examination tenderness to right of uterus with an indistinct tumor close to uterus. The diagnosis was considered doubtful, although hemorrhage from some unknown cause was considered probable and an operation was commenced. Incision was made in the right semilunaris. On opening into the abdominal cavity there was a spurt of arterial blood, so profuse that it was suggested that I had cut an abdominal aneurysm, but clots soon followed. On examination the right Fallopian tube was found with an enlargement the size of a large olive, in which there was a rent admitting the finger-tip near the ovarian extremity, through which blood was rapidly flowing. The tube with its contents and the ovary was easily brought up and Tait's knot applied, after which the whole was removed with the actual cautery. The wound was then closed and dressings applied. The patient made a rapid recovery and was discharged well August 8. This was a case of ruptured tubal



pregnancy. She would have died of hemorrhage in a short time if nothing had been done.

*Case 2.*—Extra-uterine pregnancy; death of foetus at about the sixth month; laparotomy at tenth month; recovery. Mrs. B., æt. 26, had always been well. Married nine years and had never before been pregnant. About September 1, 1887, she began to flow every day. About October 12 she began to have nausea and vomiting which was persistent and severe. Since there have been monthly disturbances with "quite a show most of the time." Felt motion about fifth month. After August 1 movements continued two months and then stopped. Twice she was apparently going to be confined but nothing came away. There was a large tumor of the abdomen, fluctuating and symmetrical. Vaginal examination showed that the uterus was not enlarged. June 22, 1888, she was operated upon at the Massachusetts General Hospital. He made an incision in the linea alba, through which he came down upon a vascular tumor with an apparent muscular wall and apparently everywhere adherent. An incision was made into the mass until he came upon a cyst, in which he could unmistakably feel the parts of a large foetus. The cavity of the tumor contained a large quantity of a chocolate colored fluid. The placenta was found to be placed with its center opposite the bifurcation of the abdominal aorta, and was everywhere adherent to the intestines. It was soft and friable and a large portion of it was removed. Drainage was secured through the posterior cul-de-sac into the vagina. The patient made a good recovery.

DR. J. W. ELLIOTT: In this class of cases the mortality is high because there is danger of septic infection. The patient is usually infected before the operation is done. I would like to ask what was the final result in the second case?

DR. RICHARDSON: There was a very small sinus at the end of the abdominal wound. The vaginal tube was left in a few days. There was constant irrigation. The temperature immediately fell, and remained a degree or two below normal.

DR. S. N. NELSON asked how much, if any, of the sac was removed?

DR. RICHARDSON: None of the sac was removed, and only about one-third or one-half of the placenta was removed. Any further attempt at removal would have been bad practice. He would like to ask Dr. Elliott if he means auto-infection when the foetus is dead.

DR. ELLIOTT: There are two classes; a, when the foetus dries up and becomes stone, when generally there is no reason to interfere; b, when the foetus becomes macerated. In this class I do not know what starts this course, but infection comes and death by septicæmia. They are favorable if the sac can be opened without opening the general peritoneal cavity.

DR. JOHN HOMANS: The point of these cases is, early recognition, then operate, and the high mortality would be lessened. It is doubtful if there is a true abdominal pregnancy. They are either tubal, tubo-ovarian, or tubo-uterine.

DR. NELSON said that he had seen a case rather recently that was somewhat similar to Dr. Richardson's case 1. The patient was about 35 years old and the mother of two children. She had not been pregnant for seven years, since when menstruation had been irregular. She suffered from indefinite abdominal pains with nausea and sinking at the stomach. There was a slight uterine flow, which for the most part confined her to bed for four weeks prior to death. The breasts were soft and flaccid, the abdomen slightly tender on pressure, the uterus somewhat enlarged and slightly retroverted, but easily movable. No enlargement to be felt about the uterus by very careful examination, and extra-uterine foetation was dismissed from the discussion. She seemed to improve gradually until, the night before death, she was seized with the most excruciating pains, resulting in collapse. When seen she was *in extremis*. The autopsy showed the abdomen filled with clotted blood, which had escaped from a ruptured sac of extra-uterine foetation in the right iliac region. This, on dissection and removal, was found to have originated in the fimbriated extremity of the right Fallopian tube. The sac was about 2½ inches in diameter and contained a foetus about four inches long.

DR. RICHARDSON, in closing the discussion, said that Tait has reported 35 cases of operation for extra-uterine pregnancy, with two deaths and a number of viable children. In an acute abdominal case, when the woman is in a serious state of collapse, with low temperature, there is probably hemorrhage which requires interference; with a high temperature, there is probably perforation, and again interference is necessary. Do not delay at all.

DR. ROYAL WHITMAN presented

#### A CASE OF APPENDICITIS IN A CHILD. OPERATION. RECOVERY.

On Saturday, July 16, 1888, a boy, having been in perfect health, on awakening after a restless night, complained of pain in the right side and difficulty in moving the right leg. On Sunday he was worse. An enema was followed by two free movements of the bowels. On Monday the abdomen was not markedly swollen or tympanitic. The right inguinal region was extremely sensitive to pressure, dull on percussion, and on palpation a round, hard tumor about the size of an orange was apparent. Pulse 110. Temperature 101°. Thursday he was worse; pulse 120, temperature 102°, the abdomen swollen and tympanitic, and the tumor was somewhat larger and better defined. A large enema had brought away foul-smelling

shreds and white matter, which had been thrown away. A history of spontaneous opening of the abscess. The tumor showed no change in outline. The patient was drowsy and stupid, and so much worse that an operation was performed. On opening the abdominal wall, the adherent wall of the abscess was opened and about an ounce of foul pus evacuated. The cavity was carefully washed out with hot water and a seed, apparently of an orange, came away. Drainage tubes were inserted and the cavity packed with iodoform gauze. The temperature fell at once to normal. The packing and tubes were removed on the fourth day. He was practically well sixteen days after the operation.

In discussing the case DR. A. T. CABOT said the appendix is a trap which serves to catch many substances. He had seen three different cases in which pins were discharged from the region of the cæcum, after intervals of three to fifteen years after the pins had been swallowed.

DR. RICHARDSON: In cases of appendicitis we should operate immediately if we want to do any good. Even then the prognosis is bad. In any case where there is a tumor and no general peritoneal infection, it seems to me that one is not justified in waiting if the symptoms are getting worse, if the temperature is rising or if there is any evidence of general peritoneal infection. Objections are made to operating because so many get well without any operation. This is true, but they all belong to that class of cases where the general peritoneal cavity is not easily infected, where the vermiform appendix is sealed anatomically behind the cæcum and out of the way of the general peritoneal cavity. Each case must be judged on its own merits. It is very difficult to lay down any rule.

### American Medical Association.

#### *Section on Dermatology and Syphilography.*

L. DUNCAN BULKLEY, M.D., CHAIRMAN.

F. DUNLAP, M.D., SECRETARY.

(Concluded from page 61.)

DR. FRANK WOODBURY, of Philadelphia, read a paper entitled

BRIEF NOTE ON TWO CASES OF PRIMARY,  
DIFFUSE, EXFOLIATIVE DERMATITIS  
(PITYRIASIS RUBRA.)

(See page 81).

DR. REYNOLDS, of Chicago, said he had only seen two cases. One of these, a man 50 years of age, in the Cook County Hospital, was red over his entire body, the surface discharging some

moisture at times. The disease was ultimately fatal. The other was a farmer over 60 years of age, in whom the disease had existed about a month when first seen. There was almost universal redness, and scales were shed in great abundance. There was cedema of lower extremities, but no discharge or moisture of the surface of any consequence. There was some itching. He was treated with laxatives and tonics internally; ointments and mildly stimulating lotions externally. He had almost completely recovered when last seen. He was disposed to regard this, however, as a case of eczema. He thought it was in certain cases almost impossible to draw the line between this disease and eczema. The only distinctive features which pityriasis rubra is said to possess are: First, the presence of universal redness; second, little itching; third, absence of moisture; fourth, fatal character. In regard to the first symptom, he knew no reason why an eczema might not assume an almost or quite universal character. In regard to the absence of itching, in some cases of eczema the itching was not necessarily great. As regards the absence of moisture, it was not claimed by Dr. Bulkley and others who had reported cases that moisture was necessarily absent. And lastly, in regard to the characteristic of fatal termination, there was no reason why an eczema, if universal and persistent, which it might be under certain circumstances, need not ultimately prove fatal. All this being the case, what was there left to distinguish this disease as entirely separate and distinct from eczema?

DR. BULKLEY said he had seen a number of cases. Two in Vienna, one in Paris, and two or more in this country.

We must be very careful in the diagnosis of pityriasis rubra if the case does not fulfill all the characteristics of the disease. We see a universal eczema which is erythematous in character, and also a more or less general dermatitis, often of artificial causation and more or less brief duration, both of which should be differentiated from the disease in question. Itching may be a feature in dermatitis exfoliativa, but it differs from the itching of eczema, being very much less intense and distressing.

In 1883 two patients with this complaint, a woman æt. 49, and a child of 13 years, entered the New York Skin and Cancer Hospital, and have remained there ever since, and are even worse than when admitted in spite of faithful treatment.

When first brought in the child was emaciated, the knees were drawn up, the hands flexed, and the entire surface of the skin red and desquamating freely. The woman had also the whole body affected, and at times had almost intolerable itching. Both have lost their fingernails, there being only a shapeless mass of imperfectly-

formed, soft nail tissue near the root of the nail, the ends of the fingers and thumbs being pulpy and soft.

The exfoliation has in both cases affected the rete to such an extent that there is no tendency to the formation of an epithelial covering. Both have what could be elsewhere called a moist eczema on certain portions, which will be at times replaced by the same red, desquamating surface that affects the rest of the body. The point to be emphasized is that the disease may at times itch, and may show moisture, and yet be rightly regarded as an exfoliative dermatitis, quite distinct from eczema. The speaker regarded the affection as a neurosis. He hoped eventually to have an autopsy, and expected to find lesions of the cord. The woman had derived comfort, and it was thought, benefit to the skin condition by the application of an ice bag to the spine twice daily.

In the treatment every thing had been used that could be suggested. At present both patients keep the surfaces covered with an ointment of carbolated petroleum plastered on with a brush, which gives more relief than any other application which has been employed.

DR. RICKERTS, of Cincinnati, said that he had seen seven cases of general and partial exfoliative dermatitis, some simple dermatitis and others eczema.

Two of these cases of pityriasis rubra were those referred to by Dr. Bulkley, observed while interne in the New York Skin and Cancer Hospital; two others were in the series of Dr. Fox, one in a man of 38 and the other a girl of 11, in both the eruption followed attacks of psoriasis, and in the latter case it resulted from an application of an ointment of chrysarobine.

The fifth case was that of a girl 3 years of age, where at least five-sixth of the entire skin was affected; the sixth case was in a man 35 years of age, the exfoliation being general, it followed an attack of rheumatism and lasted but a few weeks, and was thought to be simple dermatitis. The seventh case was in a woman 23 years of age, affecting the cheeks and neck, and was really more of an eczematous nature.

In all of the cases mentioned except two, there were present all of the prominent symptoms of pityriasis rubra, viz., redness, scaliness, and itching. In the two exceptions the exfoliation was partial, redness was hardly perceptible, but scaliness and itching seemed to be relative to the amount of surface affected.

From the fact that all but two have recovered within three or four months, he was inclined to think that those that recovered were not pityriasis rubra, but eczema and simple dermatitis.

As to treatment, the application of carbolated olive oil and starch had given better satisfaction than anything else that he had tried, in connec-

tion with constitutional treatment, in the way of tonics, iron, arsenic, phosphorus, etc.

In the two cases of Dr. Bulkley, Dr. Ricketts had applied the thermo-cautery in the region of the spine, once a day for two weeks at a time, and had gradually increased the amount of carbolic acid to 40 grains per day, but had received no benefit from either.

DR. C. E. CALDWELL, of Cincinnati, said he had seen but two cases in the clinic of Kaposi, in Vienna, and in one of these cases, the recollection of which is rather indistinct, there were some doubts as to the diagnosis. His recollection of the anatomical and clinical features of the other case was very vivid, but he could not remember the age of the individual. There were present in this case moderate itching and a constant feeling of chilliness and shivering, so that the patient was obliged to wear a blanket. There was present at the same time an old man with eczema universale chronicum, whose case, on account of the universal dissemination of the disease, with the absence of moist areas, resembled greatly one of pityriasis rubra. The chief difficulty in the diagnosis of this disease, was perhaps, in the rarity of its occurrence, Hebra having seen only fifteen cases, and Kaposi, up to 1882, only six cases. It was also rare to see cases in their inception owing perhaps to the mildness of the earlier symptoms. In the case mentioned there were contractures of the skin preventing extension of the fingers. There was also in these cases a slight rise in surface temperature.

The treatment in these cases was: Tonics and arsenic internally, with the application externally of fatty ointments, and Hebra's modification of Wilkinson's ointment. The continuous water-bed of Hebra would be indicated in the latter stages, where chilliness is complained of, were it not for the length of time it must necessarily be employed.

DR. RAVOGLI had seen two cases. Both died with pneumonia. The patients were not greatly annoyed with itching, but the skin was very tight and painful about the joints on account of fissures. Both patients were men, one aged 40, the other 22 years. In the older the disease had existed about seven years; in the younger about five years. Furrows existed, showing atrophy of the skin. No remedy improved their miserable condition. Arsenic was used freely, but was of no avail.

THE effects of the "Scotch Oats Essence" Company, in New York, were sold on December 7, by the Sheriff. Sixty-three gross of "Scotch Oats Essence" realized about four cents a bottle, the retail price being one dollar a bottle. —*Boston Journal of Health.*

## FOREIGN CORRESPONDENCE.

## LETTER FROM PARIS.

(FROM OUR REGULAR CORRESPONDENT.)

*Suicide of a Monomaniac—Multiple Wounds—The Cæsarean Operation in Germany versus Induced Premature Labor in France—Saving the Infants—Linear Electrolysis in Urethral Stricture—Camphorated Naphthol.*

Dr. Langier lately brought to the notice of the Academy of Medicine an extraordinary case of suicidal monomania. It was that of a woman, æt. 63, who was found dead in her room, without any trace indicating struggle or the intervention of a murderer. The wounds to which this woman had succumbed were so numerous and of such nature, that it seemed at first impossible to believe that she had inflicted them herself. The autopsy demonstrated on the contrary in the most manifest manner, that it was not a case of assassination, but suicide. Dr. Langier established on the body, independently of twelve cuts involuntarily inflicted on the palm of the right hand, 142 wounds by a sharp and cutting instrument, 136 were more or less profound in the external soft parts, but the other six, situated in the neck and in the peri-umbilical region, were all necessarily mortal. The author of the note added that it would be difficult to find a more striking example of the determined and destructive mania, and at the same time of insensitiveness to physical pain, in a lunatic.

Dr. Budin, who has been temporarily appointed to the charge of the Clinique of Accouchements, lately delivered a very interesting lecture on the pros and cons of the Cæsarean operation and the induction of premature labor in certain cases of narrow or deformed pelves. He began by observing that this question presents a great practical importance, as there exists in the profession two tendencies, radically opposed to each other.

In Germany, the accoucheurs are now more and more in favor of the Cæsarean operation, and they have been encouraged by the results obtained. These results are due to the progress of antiseptic, and the perfecting of procedures. In France, the induction of premature labor is preferred, as by this means we are permitted not only to bring a child into the world, but with the improved system of treating premature birth by artificial heating (couveuse) and feeding, many an infant has been saved. As to say which of the two methods is to be commended, the future will decide. Several authors, M. La Torre among others, have taken part in the debate.

M. La Torre, in a very important work on the development of the foetus in women with deformed pelves, has pronounced against the cutting operation. He has collected statistics which may per-

mit one to prejudge the future decision. With the Cæsarean operation performed by certain practitioners, the mortality appears to have come down to 19 per cent. With premature labor, it may be said to be *nil*; the women may be saved in the proportion of 100 per cent. Dr. Budin remarks that we may already conclude that, notwithstanding the success obtained by emerited operators, the Cæsarean section remains an operation very grave, and even in those who do not succumb the woman is subject to certain distant dangers due to the uterine and abdominal cicatrices.

As regards the infants, Dr. Budin thinks that, with the Cæsarean operation, all should be saved. Some, however, do succumb, and that in the proportion of 9 per cent. according to the statistics of M. La Torre.

Premature confinements, with the "couveuse" (brooding cradles) and "gavage" (artificial feeding), have given the following results: At 6 months, there were saved at the Maternity Hospital 22 per cent of infants; at 7 months, 38 per cent.; at 8 months, 89 per cent.; at 8½ months, 95 per cent.

Dr. Budin concluded his lecture by observing that the two methods are quite distinct. It is true that, with the new procedures, the Cæsarean operation and the statistics will be improved, but we shall never arrive, as with premature confinement, at a mortality almost *nil* for the mother. Moreover, the Cæsarean operation can hardly be practiced except by a few accoucheurs of long experience and well prepared in every way, and those who do not fulfil these conditions should be forbidden to undertake such a grave and delicate operation. The induction of premature labor is, on the other hand, much more easy, and all practitioners should know how to treat infants born before term.

Dr. J. A. Fort, a professor ex-officio of anatomy and surgery, has a private clinique in Paris which is well attended, particularly by patients suffering from diseases of the urinary organs. A work on the treatment of stricture of the urethra by linear electrolysis was lately presented for the author by Baron Larrey to the Academy of Medicine. In this work Dr. Fort undertakes to point out the advantages that this new procedure possesses over internal urethrotomy, dilation and divulsion which are employed for the cure of stricture of the urethra. Electrolysis performs the cure, and the operation by this means is absolutely inoffensive, whereas urethrotomy is a dangerous operation often giving rise to fatal accidents. The treatment with the electrolyser is practiced without previous dilatation, or any other preparatory treatment. The operation is performed without causing any pain, and in a lapse of time which rarely exceeds five minutes. With this urethral electrolyser, the narrowest strictures may be operated on at once, unless they are insur-

untable. The operation is never attended with morrhage, nor followed by accidents. It does not necessitate any immediate treatment, and the patient may follow his occupations without inconvenience. Relapses occur much less frequently than by urethrotomy.

I. Desesquelle, an interne of pharmacy, has published the following note in the Archives de Pharmacie on Camphorated Naphthol. According to the author naphthol alpha and naphthol possess identical properties. If to 10 grams of naphthol beta, 20 grams of camphor be added and dissolved in water, miscible in all proportions with fixed oils. To ensure the rapid liquefaction, it is necessary that the substances should be previously finely pulverized. It is suggested that this mixture should replace carbolic acid, as the antiseptic power of naphthol is superior to that of phenol and its degree of toxicity is more feeble, as established by the experiments of Professor Bouchard.

A. B.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*The Use of the Forceps after Version—Unique Case of Extra-Uterine Pregnancy—Trouble at the University Medical School.*

At the last meeting of the Section on Obstetrics and Gynecology of the Academy of Medicine, Dr. H. C. Coe read a paper on "The Immediate Application of the Forceps to the After-coming Head in Cases of Version with Partial Dilatation of the Os;" the object of this procedure being the saving of infants' lives which at present are usually sacrificed.

He desired, he said at the outset, to call attention to a single condition in which the forceps should be at once used in cases of version, and did not wish to be understood as advising their general use after version, or even the immediate delivery of the child. The following illustrative cases were cited:

*Case 1.*—Primipara, æt. 35, with slight contraction of the anterior conjugate diameter. Patient very anxious to have a living child. Labor was induced near term on account of albuminuria and threatened eclampsia. Version was performed, and the head was so tightly grasped by the cervix that it could not be extracted until the forceps were applied. When this was done it was readily delivered, but it was then too late to save the child. The perineum was torn through the sphincter, but healed with primary sutures.

*Case 2.*—Multipara, æt. 35, with slight narrowing of the anterior conjugate. Several dead chil-

dren had been previously delivered by the forceps applied high up, and she was greatly desirous of a living child. Version was performed, and the head was arrested by the partly dilated cervix. The forceps were applied after vain attempts at manual extraction, and the child was then rapidly delivered, but could not be resuscitated. No laceration of the perineum.

*Case 3.*—Primipara, æt. 16. Eclampsia of an unusually severe type occurred, and labor was induced. Great rigidity of the soft parts. Version having been performed, the head was arrested, as before, and time wasted in attempts at manual extraction. It was finally delivered with the forceps, but the child was dead. Laceration of perineum nearly through sphincter; healed with primary suture.

*Case 4.*—Multipara, æt. 38, with hydramnios and fatty heart. Labor induced near term. There were atony of the uterus and serious cardiac disturbance, and the action of the foetal heart was very irregular. Version was proposed, and the head was grasped by the cervix. The forceps were applied after a loss of several minutes, and the child was resuscitated, but died in convulsions a few hours later. Superficial laceration of the perineum. In this instance the foetal head was large and unyielding, the fontanelles being nearly closed. In all the cases the mother made a perfect recovery.

Judging from these cases, Dr. Coe inferred that many children might be saved under these circumstances by the immediate application of the forceps. The reduction of infant mortality he thought was especially important in private practice, and it was this class of patients, in whom the accoucheur was most frequently obliged to perform version, who were most anxious to have living children.

The application of the forceps, he went on to say, did not present special difficulties. The perineum might be badly torn, or the cervix lacerated, in consequence of the rapid delivery; but patients would gladly overlook such accidents if the child's life was saved by the physician's prompt action, especially if former children had not survived.

In conclusion, he called attention to the fact that in the cases reported (two of which occurred in private practice), the operator had had skilled assistants and nurses and possessed experience in this class of cases, and yet had been unsuccessful. Under similar circumstances, therefore, he would advise that not a moment should be lost in attempts at manual extraction, but that the forceps should be applied as soon as the fact was recognized that the constricting cervix did not yield.

It was on this occasion that Dr. J. P. Tuttle read the report of his "Unique Case of Extra-Uterine Pregnancy," in which the foetus was delivered intact *per rectum*. In presenting it he said that the case suggested some of the difficulties, not to say impossibilities of diagnosis met with,

and also illustrated the complications of certain methods of treatment much lauded at present in ectopic gestation.

The patient was a lady of 35 who had been married eleven years, but never been pregnant. Dr. Tuttle was called to see her March 26, 1888, when he learned that for several years she had been treated by various methods for "falling of the womb." For some time past she had been troubled with nausea and loss of appetite; though it was stated that she had always had a delicate stomach. She had missed her last menstrual period, due March 13, and this was attributed to the blizzard weather of that date. Digital examination showed the uterus to be slightly enlarged, well down, and apparently retroverted, or with posterior mural fibroid; the use of the sound for the purpose of making an accurate diagnosis being contraindicated on account of the possible existence of pregnancy. There were great peri-uterine tenderness and heat about the parts. The right ovary was enlarged and tender, and the left could not be felt. The diagnosis made was pelvic cellulitis and ovaritis of right side; possible pregnancy.

Two days later he saw the patient during a paroxysm of pain, which was referred entirely to the rectum. It was apparently due to a spasm of the sphincter of that organ, and was promptly relieved by cold applications and the lifting up digitally of what he supposed to be an enlarged, retroflexed and gravid uterus. An examination under anæsthesia was refused, and the patient, who was not disposed to accept the theory of pregnancy, requested that she should be treated with electricity, which she said had formerly been successfully used in her uterine troubles. Believing that this was not the proper method of treatment under the circumstances, he surrendered the patient to an electro-therapeutist of the eclectic school under whose care she had been before.

April 23 Dr. Tuttle was again requested to take charge of the case. She was very weak and unable to retain anything on her stomach, and as she was still flowing from a menstrual period which had come on after an electrical *séance* several days before, an examination per vaginam was deferred. He afterwards learned that after this *séance* she had had a severe hemorrhage lasting for two hours. At the time she told him that she had had a painful menstrual period lasting six days, during which she passed large pieces of black blood, and having a slight flow, which still continued. Altogether the flow lasted for six weeks, and this led him to believe that an abortion had been produced, and an islet of placenta left adherent.

Two days later the patient was in a much better general condition, and an examination revealed the following state of affairs: Continued vaginal heat and tenderness in peri-uterine pelvic tissues; uterus enlarged to 5 inches, slightly movable, in

fair position, inclined somewhat to right side; a large round hard tumor mass between uterus and rectum, not particularly sensitive, closely attached to the uterus and movable with the latter; believed to be a fibroid, or possibly a hæmatoma. The hot douche, boroglyceride tampons, and general constitutional remedies were employed for some weeks with fairly successful results, and the patient thought she was getting well.

Later there was considerable uterine hemorrhage, which was controlled with some difficulty, and the tumor, which did not seem to increase in size, sank lower in the rectal fossa, causing retroversion and difficulty in defecation. The hemorrhage finally ceased altogether, and on June 25 he found that the tumor presented slight symptoms of softening or breaking down. He prepared to put an aspirating needle into it within a short time, but the next day he was hastily summoned to the house, where he found a fellow practitioner who had been called in in the emergency, delivering a foetus from the rectum of the patient; severe griping pains having followed the use of a cathartic the night before. The rent in the wall of the rectum was perpendicular and as straight and clean-cut as if made with a knife. It was  $2\frac{1}{2}$  inches in length and about  $2\frac{1}{2}$  inches above the anus. The cord was intact, but was atrophied, and it became detached from the placenta by the slight traction required in using it as a guide in reaching the latter. The placenta not following the child, the patient was etherized and an attempt made to remove it, but this had to be abandoned on account of the hemorrhage it excited and the weak condition of the patient. The cavity was therefore tamponed, in the hope that the placenta would detach itself or degenerate and come away gradually, and this procedure was followed by nearly fatal exhaustion, from which she rallied, under energetic treatment, in the course of two or three hours.

On June 28 the placenta was found plugged tightly in the rent, but the slightest attempt to remove it brought on a condition of severe shock. About 7 A.M. on July 1 she complained of a sinking sensation and had Dr. Tuttle summoned. He at once recognized that she was sinking from hemorrhage, although the placenta was still plugged in the rent and no blood was escaping into the rectum, and she died in about an hour. As no autopsy was permitted, the attachment of the placenta remained uncertain, but he thought it probable that it was to the left tube or ovary, from the absence of the latter in its accustomed place and from the position of the placenta to the left of the median line.

He judged that the cyst containing the child had probably burst into the cavity or folds of the broad ligament, and that but for the severe straining produced by the patient's self-inflicted catharsis, it would have proceeded to the usual result in



such cases, viz.: decomposition, abscess formation with its concomitant constitutional symptoms, rupture and discharge through the rectum or vagina. It was noticeable that there were never any of those colicky pains usually met with in ectopic gestation, and that the symptoms of pregnancy had almost totally disappeared when the patient came into his hands a second time. In fact, the symptoms were those of a simple uterine fibroid or hæmatoma, indicating that the death of the foetus had taken place before this time; and it was his opinion that this had been brought about by the electrical treatment employed. The case was of interest, therefore, he thought, as illustrating the dangers of electricity in extra-uterine pregnancy and the darkness in which we were afterwards left. The specimen was then exhibited, and it was apparently a four months' foetus.

Since the Christmas holidays several of the students of the University Medical School have been suspended for creating disturbances because Dr. F. D. Weisse, who for several years has held a professorship in the Department of Practical and Surgical Anatomy, was not made Professor of Anatomy in the place of Dr. Lewis A. Stimson. Dr. Stimson was recently appointed to the Chair of Surgery, made vacant by the resignation of Dr. J. Williston Wright, and the Faculty announced at the same time that the Professorship of Anatomy would not be filled during the present session. Dr. George Woolsey, a graduate of the College of Physicians and Surgeons, who for the past two or three years has been studying in Europe, is at present giving the lectures on Anatomy under the direction of Dr. Stimson, and Dr. H. S. Haynes is lecturing on Practical and Surgical Anatomy in the place of Dr. Weisse, who has resigned and been relieved from duty.

Dr. Alfred L. Loomis has been elected President of the New York Academy of Medicine.

P. B. P.

### LETTERS.

Medical gentlemen writing to the Editor of *THE JOURNAL* will please conform to the rule requiring MS. to be written on one side of the paper, to take pains to write the names of persons and places legibly, and to send their own names as a guarantee of good faith.

#### An Unpublished Case in the Practice of the great Piorry.

*To the Editor:*—Piorry was in the full tide of his reputation in 1853. His demonstration of the value of percussion as a means of physical exploration had then placed his name high on the roll of honor in his profession. His skill in detecting pathological conditions and changes through this process was almost magical. It was my good fortune to be present on one occasion when he demonstrated his masterly powers in this field,

At the Hospital La Charité, Paris, I found him one morning surrounded by physicians and students and engaged in examining a young girl of 15 or 18 years. The patient was lying in the prone position while her back, over the region of the kidneys, was covered with a surface of adhesive plaster. He was examining the right kidney. After percussion over a small area above the kidney he made a pencil mark upon the plaster at the border of dulness. On continuing the percussion several marks were made at short intervals and these marks were finally united by a line drawn from one to another, thus forming nearly a circle. The circumscribing line represented the outline of a kidney beneath of enormous proportions. The diagnosis of an organ so largely in excess of what would be regarded as normal largely trespassed upon our credulity. The idea of exaggeration naturally suggested itself. At this time I had no thought that the actual facts in the case would be revealed—that this diagnosis would be either verified or disproved.

I did not see this patient again for several days, and on the next occasion it was under very different circumstances. The body laid upon a table prepared for post mortem examination. As students in pathological anatomy under interne Leudet, of the hospital, I, with three of my compatriots, found the body of the young girl awaiting our examination. Notwithstanding the great skill in diagnosis possessed by Piorry, we believed that we had before us the evidence which would disprove the strange diagnosis which had been asserted with so much assurance by the latter. But we were mistaken. The kidney on the side so carefully examined was found to be fully the size outlined by the great master. On the opposite side, over which he had not carried his searching examination, we found a contracted kidney no larger than an English walnut. In this kidney was a beech-nut shaped calculus having its point wedged downward into the ureter. Thus was accounted for the enlarged condition of one kidney and the contracted condition of the other.

It goes without saying, we were only too happy to be able thus to verify the remarkable diagnosis of Piorry, and at the same time to demonstrate so wonderful a triumph in medical science; revealing to the profession, as it does, possibilities that before had hardly been suspected.

HENRY RAYMOND ROGERS, M.D.

Dunkirk, N. Y.

#### A Case of Poisoning by Antifebrin; Recovery.

*To the Editor:*—Mr. L. presented himself at my office about 3 P. M. on August 14, informing me that he had taken some horse medicine, and upon examining my patient I found the most cyanotic subject that I ever had the misfortune of treating,



showing a livid tint of the skin resembling the tint of asphyxia, and complaining of general weakness, pain near the heart, a soreness beneath the sternum, with a beating pain passing from temple to temple, while to assume the erect position caused giddiness, increasing the cyanotic hue and a stinging pain in the eyes, while to assume the recumbent position gave him freedom from all suffering. Patient had no nausea or vomiting, but body was bathed in perspiration, respiring thirty times per minute, and a pulse of 110.

The medicine was taken about 5 A.M., producing in thirty minutes a form of intoxication and desire to sleep, which our patient indulged in until 10 o'clock. Gave him stimulants and ordered him to keep a recumbent position. I was afterwards informed that he had taken of a mixture of antifebrin one ounce, and elixir taraxacum comp. six ounces, of which solution he drank about seventeen drachms. I am sorry to say I did not take his temperature. I take great pleasure in reporting this case for it certainly demonstrates the susceptibility of the patient to this drug. Sée acknowledges its value, says it is poisonous, in doses of about 25 grains. Vinberg reports a case of typhoid where 10 grains every four hours produced great cyanosis and a weak compressible pulse of 116. Sexton tells of a case where 10 grains of antifebrin reduced the temperature from 105° to 102° F., 5 grains more were given, which were followed in two hours by cyanosis of the whole body, profuse sweating and collapse; while Pavai Vajna states that in weak patients a dose of 0.25 grams may produce collapse, while in some cases 1 gram has no effect at all.

In conclusion will say the patient—a farmer—resumed work the next day.

W. R. ALLISON, M.D.

Good Hope, Illinois.

### The Migration of a Needle.

*To the Editor:*—On Dec. 9, 1888, Miss Nellie S., æt. 17, called at my office and stated that she believed she had a needle in her arm. Upon careful inquiry I could find no reason for such a supposition, except that she could feel something like a needle, one end of which was beneath the skin, while the other was deep in the muscles near the bone. She had never run a needle into her arm or in any other part of her body, and it was with much doubt as to the correctness of her belief that I began my examination.

Miss Nellie pinched up a roll of integument and muscle on her arm, and thrust one end of the supposed needle against the skin. It had all the appearance of some such foreign material, and I cut down upon the projecting point with forceps; I then removed a needle two inches long, with

the point broken off, and the whole needle enclosed in a capsule. It was the head of the needle found beneath the skin and the point was near the bone. The point from which the needle was removed was six inches below the tip of the shoulder and seven inches above the elbow on the front side of the arm.

The young lady's mother states that when 5 years of age the child was sewing and swallowed the needle. This needle must have lodged in some mucous fold of the pharynx or upper part of the œsophagus, and then passed down between the muscles of the neck and shoulder, and down the arm to the point from which twelve years later it was removed. Concerning this peculiar migration of such substances, J. Solis-Cohen says, that "sometimes needles and pins work their way in safety through the different tissues to the surface of the body, even to the most unlikely regions."

SARA A. KIME, M.D.

Fort Dodge, Iowa, Dec. 10, 1888.

### From Muskegon, Michigan.

*To the Editor:*—A new medical club has recently been organized at this place. Its membership will be limited to a specified number. It begins with a charter membership of seven, as follows: Drs. J. P. Stoddard, J. M. Cook, O. C. Williams, C. P. Donelson, J. VanderLaan, G. S. Williams, and F. W. Garber. Dr. VanderLaan has been made president, and Dr. Garber secretary and treasurer. Meetings will be held bi-monthly. The first regular meeting will be held Tuesday, January 22.

Twenty-eight cases of diphtheria have been reported to the Health Officer since December 1, 1888. These, together with the cases not reported, would make about forty cases within that time. With but one or two exceptions, the disease has manifested itself in a very mild form. Three deaths only have been reported.

F. W. G.

Muskegon, Mich., January 14.

### Web Fingers and Toes.

*To the Editor:*—Five years ago Mrs. T., lately removed to this locality, had a child four years old having a complete web or fleshy union of ring and middle fingers of one hand. A year and a-half later her neighbor bore a child having a corresponding union in two pairs of the fingers of each hand, and similar union of the smaller toes of both feet. Was it a simple coincidence, or did the mother or father impress the child thus?

I. W. S.

Charles City, Iowa, Dec. 13, 1888.

## BOOK NOTICES.

A TREATISE ON THE DISEASES OF WOMEN. For the use of Students and Practitioners. By ALEXANDER J. C. SKENE, M.D., Prof. of Gynecology in the Long Island College Hospital, Brooklyn, N. Y., etc. 8vo pp. 966. New York: D. Appleton & Co. 1888.

This handsome volume, which is profusely illustrated and beautifully printed, is the written embodiment of many years of teaching, and practical experience in the treatment of the affections of which he writes, and the practitioner cannot go very far wrong who follows the recommendations of Professor Skene.

It will be observed in an examination of this book, that Dr. Skene has aimed rather to give his opinions as they are now formed, than to burden the work with a profusion of quotations. The student of a historical turn must look elsewhere for recitals of ancient history, but in everything pertaining to the surgical treatment of the diseases of women, he need seek no farther for a convenient and fairly complete text-book.

In this, as in other branches of medical literature, the latest book is apt to be the best, because other things being equal the author has the recorded experience of his predecessors to guide him, and it is therefore no disparagement to some other works on diseases of women to say that the work under consideration is to-day the best book on the subject in the English language.

He begins, as is natural, to a work on this subject with a description of the methods of observation or diagnosis, then follows an account of the development of the sexual organs, (and reference is made to the malformations in this chapter), arrests of development with their accompanying menstrual disorders, flexions of the uterus, diseases of the external organs of generation, diseases of the vagina, and injuries to the pelvic floor; this chapter includes an account of rectocele and cystocele. In speaking of the sutures for these deformities he says:

"The success which J. Marion-Sims obtained with silver-wire led at once to its general use in gynecological operations. There is, however, good reason for believing that the results obtained by that great surgeon depended as much upon his skill in using sutures as upon the material which he used.

"To-day, we know that it matters little whether silver-wire or prepared silk sutures are used, provided they be properly introduced."

The different operations for these deformities are accurately illustrated by colored lithographs. A chapter is devoted to fistula in ano and coccydynia, and two on inflammatory affections of the uterus; there is a short chapter on subinvolution, and a chapter to his particular hobby (who has them not) "Sclerosis of the Uterus," which really is an increase of connective tissue and loss

of muscle cells, a clearly degenerative change analogous to the fibrous stroma in carcinoma, and it is probably true that such cases frequently become cancerous, and are so reported without reference to the original history of sclerosis. In the chapter on membranous dysmenorrhœa, we notice the old time picture from Simpson, originally published in this country in the Philadelphia reprint of Simpson's lectures, twenty-five years ago. This picture has been on duty so long that it ought now to be retired for "long, faithful and meritorious service," as the army phrase states it. It is the more unnecessary as there are more original illustrations than any other text-book on the subject with which we are acquainted.

Lacerations of the cervix receive due consideration, and the author agrees fully with Emmet in estimating their great importance. Indeed he gives that distinguished surgeon the full credit of establishing their causative relation to many other uterine diseases. The various dislocations of the uterus receive their full share of attention. Concerning Dr. Byrne's method of amputation of a prolapsed uterus by galvano-cautery, he frankly says, that while the histories of cases are very satisfactory he has had no experience with that operation. This principle of stating nothing upon hearsay, is the one pervading principle of the book; the warmth and enthusiasm of Marion-Sims is lacking, but instead we have the evidence of a firm purpose to state the exact truth, a little bald, may be at times, but its honesty commends it. When he has abandoned an operation, having tried it and found it valueless, he frankly says so; and many a practitioner will thank Dr. Skene for giving in this straightforward manner the results of his judgment formed after due trial.

The chapter on the "abuse of pessaries" is one of the most interesting, although short; but our waning space warns us to pass on. On diseases of the ovaries our author has given a complete résumé of the subject, including tumors and their treatment; he discards the term oöphorectomy as applied to the Battey's operation, and used ovariectomy instead. Concerning ovariectomy he says:

"I have long entertained the opinion that ovariectomy is the most difficult operation in the whole field of surgery. This is, however, a matter of opinion, and may be an error on my part, but it is positively certain that a thorough knowledge of surgery and all attainable dexterity and skill in operating can be employed with advantage in removing ovarian tumors. This operation differs from all others in the number and variety of complications which it affords.

"It is a notorious fact that this most important of operations has been performed by many who had no claim to be called surgeons; obstetricians who, having turned their attention to some of the plastic operations of gynecology and succeeded, have next taken to ovariectomy. A few, bolder still, have made their *début* in surgery as

ovariotomists, without any previous surgical experience.

"It is clearly evident that one should be well grounded in the science and art of surgery before taking up ovariectomy. The consummate surgeon can readily transfer his art to this department of abdominal surgery with far more hope of success than one who seeks to acquire skill by practicing ovariectomy as his maiden effort."

We have already overrun our allotted space in glancing at the contents of this excellent work, but there is a most important as well as original chapter to be singled out from the remainder for notice, and that is the one devoted to gynecology as related to insanity in women. This chapter is based on the results of a study of the subject at the King's County Insane Asylum. Our author claims that: 1. "Well developed insanity with impaired general nutrition causes suppression of the functions of the sexual organs." 2. "Deranged innervation tends to produce the same result," 3. "In mild forms of insanity menstruation may continue normal," 4. "Excessive menstruation among the insane is usually caused by uterine disease, and should be accepted as evidence of such."

In examination of insane patients, he has found nitrous-oxide the most expedient anæsthetic, owing to the difficulty and danger of giving other anæsthetic agents while the patient was forcibly held.

In conclusion, we congratulate the author on having produced one of the most useful text-books on this subject, and it only lacks a chapter on sterility and its treatment, to make it complete.

LEÇONS DE GYNÉCOLOGIE OPÉRATOIRE, PAR VULLIET, Professeur à la Faculté de Médecine de Genève, etc., and LUTAUD, Professeur libre de Gynécologie à l'École pratique, etc. Paris: J. B. Baillière et Fils. 1889.

This book is sent out French fashion, in paper covers and should at once go to the bindery, but it is an excellent book nevertheless; the typographical execution is good, the illustrations numerous, original and generally good, although mechanically there are many that are not up to the American standard of finish.

The work is in substance a report of the lectures delivered by MM. Vulliet and Lutaud on gynecology. In the preface the authors refer to the paucity of reference to gynecology in French works on Diseases of Women, and say that for the student, there is no help from the classical text-books, and that they must obtain their knowledge of the subject from the clinical teaching and didactic lectures, and that it is only within the last quarter of a century that the subject has been referred to. The authors say:

"What progress has been accomplished in less than a quarter of a century! Sims, that daring innovator, who during the war of secession had left his country, arrived

in France and astonished the veterans of surgery by his practical genius. Velpau and Nélaton received him with enthusiasm, and the treatment of vesico-vaginal fistula became a current operation. His *Clinical Notes on Uterine Surgery*, published simultaneously in Paris and London, in 1866, was the point of departure of the great surgical movement which rapidly radiated all over Europe.

"One must realize that this book, under its modest title, truly contains the germ of all the gynecological innovations which to-day take rank among the classical operations; the methods of incision of the cervix, the treatment of vaginismus, of sterility, etc."

Surely Americans should be proud of this generous recognition!

The subject is treated of in twenty-three lectures of which fourteen are by M. Vulliet and the remainder by M. Lutaud. The series comprises: Methods of Exploration, Uterine Catheterism, Uterine Dilation, Displacements, Curettage, Trachelorrhaphy, Genito-Urinary Fistulas, Uterine Fibromata, Massage in Gynecology, Uterine Cancer, Uterine Orthopædics, on which last topic five lectures were given. Sterility and its Treatment forms the subject of four lectures which conclude with one by M. Lutaud on Methods of Artificial Fecundation.

It is a little singular that we should find supplied in this book the identical chapters missing from Skene's, and the distinguished authors have made these lectures extremely complete in this particular.

We note the classification of sterility as follows:

1. "Sterility by inaptitude to copulation (vulvitis vaginismus, vaginal atresia, etc.).

2. "Sterility by mechanical obstruction to penetration of the sperm into the uterus (uterine atresia, flexion concity of cervix, etc.).

3. "Sterility resulting from non-retention of the sperm in the uterus, or the destruction of the ovum by morbid secretions (as in dysmenorrhea, menorrhagia, amenorrhea, endometritis, uterine catarrh, etc.).

4. "Sterility by inaptitude to ovulation and incubation (disturbances of the ovarian function, amenorrhea, infantile uterus, absence of the ovaries, ovarian ectopia, etc.)."

The author mentions with regret the growth of Malthusianism in France, and says that in many instances young married women prevent conception for the first few years of married life, thinking to bear children when their fortune should be greater, and in a great many of these cases permanent sterility has been produced.

In the lecture on artificial fecundation, the author refers to the experiments of Spallanzani in 1767, of Hunter in 1799, and of Girault in 1838 to 1869 and published in the latter year. Sims' publication was in 1866. Gigon, Courty, Leseur, Delaporte, Leblond and Pajot are also given due credit for their observations. It is, however, a little amusing to be told with gravity that artificial fecundation should not be attempted after the menopause nor during an early amenorrhea, nor when there is contracted pelvis or irremediable congenital defect of the genitalia, or chronic pelvic peritonitis.

In twenty-six cases he obtained complete success in two, in two there was an abortion near the third month, and the remaining twenty-two cases were unsuccessful; still as this operation does not involve pain or danger, it seems worth the trial in properly selected cases. These lectures are very entertaining in style and very instructive. We trust that the book may reach many editions, and recommend it with much pleasure to those of our readers who read French.

**HAND-BOOK OF HISTORICAL AND GEOGRAPHICAL PHTHISIOLOGY, WITH SPECIAL REFERENCE TO THE DISTRIBUTION OF CONSUMPTION IN THE UNITED STATES.** Compiled and arranged by GEORGE A. EVANS. New York: D. Appleton & Co. 1888.

This is a most instructive and interesting work. It has been compiled with care from excellent sources. It contains numerous statistical tables. There is no subject in regard to which we need the fullest information more than this of phthisis. The conclusions arrived at in regard to the influence of climate on the disease are not different from those already promulgated by others. For the data pertaining to the geographical distribution of consumption in countries other than the United States, Hirsch's "Handbook of Historical and Geographical Pathology" has been extensively quoted from. The statistics for the United States have been gathered from the "Tenth U. S. Census Reports."

N. S. D., JR.

**WOOD'S MEDICAL AND SURGICAL MONOGRAPHS, Vol. i, No. 1.** "The Pedigree of Disease," by JONATHAN HUTCHINSON. "Common Diseases of the Skin," by ROBERT M. SIMON. "Varieties and Treatment of Bronchitis," by DR. FERRAND.

This is the first volume of a new series of books started by the well-known publishing house of Wm. Wood & Co. They propose to issue a similar volume each month during the coming year. The series will be made up of monographs taken from the current literature of foreign lands. In the volume before us, and there is promised in the one to follow, two articles excerpted from English publications and one translated from the French. This first number is a volume of good proportions containing two hundred and fifty odd pages. It is bound in stiff paper covers. It is well printed on good paper. The first monograph by Jonathan Hutchinson fills one hundred and twelve pages; the second by Robert M. Simon, forty pages; and the third by Ferrand, ninety-nine pages.

The only part of the volume we have read with care, as it appears here, is the last. It is unfortunate that so poor a translation should be ad-

mitted to the series, and its presence in the first number does not argue well for those to come. This part of the volume contains many typographical blemishes as well as badly constructed sentences. For instance, on page 166 we find, "In fact these rings become the more incomplete the further the branches from the trachea." A little lower on the same page a singular noun appears where a plural one should be. Numerous such awkward sentences as the following can be found: "We have over and again pointed out to you in the wards emphysematous individuals in whom, under the influence of some cause, but slightly irritant, the bronchi becomes engorged, so that the dyspnoea is ardent and the cough short and choked, frequent and without much expectoration, perhaps a little stringy mucous more or less mucilaginous."

N. S. D. JR.

**CLINICAL LECTURES ON CERTAIN DISEASES OF THE NERVOUS SYSTEM.** By PROF. J. M. CHARCOT; translated by E. P. HURD. 150 pp. Detroit: Geo. S. Davis. 1888.

These lectures are not very closely related in their subjects to one another and are not by any means exhaustive. They are interesting and instructive and worthy of a careful reading. The subjects of the several lectures are: Spiritism and Hysteria; Isolation in the Treatment of Hysteria; Choreiform Movements and Tremblings; Rhythmical Chorea; Muscular Atrophy consequent on Certain Articular Lesions; Contractions of Traumatic Origin; Painless Tic of the Face in an Hysterical Patient; Muscular Atrophy Consecutive to Articular Rheumatism; Six Cases of Hysteria in the Male Subject.

N. S. D., JR.

**ELEMENTS OF PRACTICAL MEDICINE.** By ALFRED H. CARTER, M.D., Lond., etc. Fifth Edition. H. K. Lewis: London. 1888.

It is not necessary to describe in detail a work that, as this one has, passed through five editions in eight years. The author has succeeded in describing tersely and clearly the essentials of Practical Medicine. The work cannot displace the large text-books, but will be a useful summary and introduction to the subject.

N. S. D., JR.

**THE PHYSICIAN'S HAND-BOOK FOR 1889.** By WILLIAM ELMER, M.D., and ALBERT D. ELMER, M.D. New York: W. A. Townsend Publishing Co. Price, \$1.50.

This well known hand-book and visiting list needs no commendation from us, except to say that it is in every way equal to its predecessors and is now in the twenty-fifth year of its publication.

## MISCELLANY.

**ASSOCIATION NOTICE.**—*To Secretaries of Medical Societies:* You will oblige the undersigned by sending to his office your name and address, in order that the list of societies in affiliation with this body may be correctly recorded. Yours respectfully,

W. B. ATKINSON, Secretary.

1400 Pine Street, Philadelphia.

**ASSOCIATION OF ACTING ASSISTANT SURGEONS.**—The annual meeting of the Association of Acting Assistant Surgeons of the U. S. Army will be held in Newport, R. I., Monday, June 24, 1889, at 8 P.M. Members of the Association are cordially invited to read or present papers concerning the history and the welfare of the corps. Members who intend to be present are requested to notify the Recorder at the earliest possible date.

A. REEVES JACKSON, M.D., President,  
271 Michigan Ave., Chicago, Ill.

W. THORNTON PARKER, M.D.,  
Recorder, A. A. A. S., Newport, R. I.

NEARLY 200,000 sheep have been guaranteed to the Canterbury Frozen Meat Company, of New Zealand, for shipment to London during the season of 1889-90.

**SPANISH QUARANTINE RESTRICTIONS.**—*Canary Islands.*—The Minister of Spain informs the Secretary of State, under date of December 17, 1888, that the Spanish Government has ordered that "all vessels coming from the Canary Islands, except those coming from the Island of Santa Cruz de la Palma (which is 150 nautical miles from the nearest island of the aforesaid group), shall be admitted to free intercourse with Spanish ports. The Government of Spain has taken all necessary measures of isolation in the rest of the Canary Archipelago, and has declared none but the aforesaid island of Santa Cruz to be infected. The undersigned, consequently, in pursuance of the instructions of his government, hastens to inform that of the United States that American vessels may, without the slightest danger, enter the ports of the Canary Islands, excepting those of Santa Cruz de la Palma. This information is furnished with a view to preventing the injury that would otherwise accrue to merchant vessels and to commerce in general.—*Weekly Abstract of Sanitary Reports*, Jan. 4, 1889.]

**HOW DOCTORS ARE VIEWED BY A GOOD-NATURED LITERARY MAN.**—The doctor who could not laugh and make me laugh I should put down for a half-educated man. It is one of the duties of the profession to hunt for the material of a joke on every corner. Most of them have so esteemed it. Garthe, Rabelais, Abernethy and a hundred or so more too near to be named, what genial, liver-shaking heart-quickening, wit-wakening worthies they were and are! To the son who loves her best Nature reveals most her tricks of workmanship. He knows there is a prize in every package of commonplace and sadness, and he can find it—not only the bit of fun shining to the eye of the *connoisseur* like an unset jewel, but the eccentricity, the resemblance, the revelation, countless signs and tokens of the evanescent, amusing, pathetic creature we call the human. Heartless, grasping, irreverent? The deepest compassion for human ails, the broadest generosity to human needs, the highest respect for all that is strong and pure and holy in human lives, I have seen in the men who come closest to the mystery of life and the mystery of death, who read the naked heart when it is too weak or too sorrowful to hide its nakedness, who know our worst, and are most of them wise enough to strike the balance. If they are cynics it is we who have made them so. We are the books out of which they

learn their lessons.—*Mr. A. B. Ward in Scribner's Magazine.*

## PAMPHLETS RECEIVED.

Coleman, Jno. S., M.D., of Augusta, Ga. *Cæsaræan Section.* New York: 1888. Reprint from the Amer. Jour. Obstet. and Diseases of Women and Children. *Ibid.* *The Multiple Wedge Principle in the Treatment of Organic Strictures of the Urethra.* Extract from Trans. Am. Surg. Ass'n. Philadelphia: 1884.

Van Bibber, W. C., M.D., of Baltimore, Md. *The Prevention of Yellow Fever in Florida and the South.* Cutting from the Maryland Med. Jour.

Mittenberger, Geo. W., M.D., of Baltimore, Md. *Tetanioid Falciform Contraction of the Uterus* (R. P. Harris). *Ante-Partum Hour-Glass Contraction of the Uterus* (Hosmer and Smith). Reprint from Maryland Med. Jour.

## LETTERS RECEIVED.

J. Walter Thompson, New York; W. B. Atkinson, M.D., Philadelphia; J. A. Brooks, M.D.; R. Condit Eddy, M.D., New Rochelle, N. Y.; J. O. Berlin, M.D., Bath, Pa.; Frank W. Garber, M.D., Muskegon, Mich.; Wm. A. Phillips, Jr., M.D., Salina, Kan.; O. H. Merrill, M.D., Corinna, Me.; Chas. S. Northen, M.D., Chulafinnes, Ala.; A. Ostertag, M.D., St. Louis, Mo.; C. H. A. Kleinschmidt, M.D., Washington, D. C.; I. C. Rosse, M.D., Washington, D. C.; S. Chris. Lange, M.D., Pittsburgh, Pa.; Richard H. Day, M.D., Baton Rouge, La.; A. F. Walter, M.D., Gladbrook, Ia.; Prof. G. Rummo, Rome, Italy; A. A. Noyes, M.D., Minneapolis, Minn.; Mr. Charles King, Oswego, N. Y.; W. C. Van Bibber, M.D., Baltimore, Md.; Mr. Frank A. Burdette, Chicago, Ill.; Edward F. Wells, M.D., Shelbyville, Ind.; W. C. Briscoe, M.D., Washington, D. C.; Mr. Geo. F. Niles, Wataga, Ill.; R. J. Dunglison, M.D., Philadelphia, Pa.; Mr. C. B. Leonard, Mauch Chunk, Pa.; J. Ewing Mears, M.D., Philadelphia, Pa.; Ward Bros., Jacksonville, Ill.; A. L. Gihon, Med. Dir. U. S. Navy; J. S. Wright, M.D., Brooklyn, N. Y.; Joseph Taber Johnson, M.D., Washington, D. C.; Rose Wright Bryan, M.D., Glencoe, Ill.; Thos. Leeming & Co., New York; Malted Milk Co., Racine, Wis.; W. M. Harsha, M.D., Decatur, Ill.; J. J. Rendleman, M.D., Makanda, Ill.; G. E. Francis, M.D., Worcester, Mass.; W. H. Peck, M.D., Lyons, Ia.; E. Smith, M.D., Burchard, Neb.; John E. Purdon, M.D., Valley Head, Ala.; Thos. W. Kay, M.D., Baltimore, Md.; Chas. F. Disen, M.D., Minneapolis, Minn.; J. B. Stinson, M.D., Sherman, Tex.; H. Morey, M.D., Alta, Ia.; James Brewster, M.D., Scotland, Dak.; A. B. Newkirk, M.D., Falls City, Neb.; A. M. Leslie Surgical Instrument Co., St. Louis, Mo.; L. C. Laycock, M.D., Decatur, O.; C. S. Stewart, Anite, La.; Travelers Insurance Co., Hartford, Conn.; J. A. Brobst, M.D., Macungie, Pa.; Thos. D. Strong, M.D., Westfield, N. Y.; L. S. Trowbridge, Detroit, Mich.

*Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from January 5, 1889, to January 11, 1889.*

Major William E. Waters, Surgeon, leave of absence granted in S. O. 129, Dept. of the Columbia, November 9, 1888, is extended one month. Par. 9, S. O. 2, A. G. O., January 3, 1889.

By direction of the President, Capt. Robert W. Shufeldt, Asst. Surgeon, will report in person to Brig.-Gen. Wesley Merritt, President of the Army Retiring Board at Ft. Leavenworth, Kan., for examination by the Board. Par. 1, S. O. 4, A. G. O., Washington, January 5, 1889.

By direction of the Secretary of War, Capt. R. W. Johnson, Asst. Surgeon, is relieved from duty at U. S. Military Academy, West Point, N. Y., and will report to commanding officer at San Carlos, Ariz., for duty at that post. Par. 10, S. O. 7, A. G. O., Washington, January 9, 1889.

# THE Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY JOHN B. HAMILTON.

PUBLISHED WEEKLY.

VOL. XII.

CHICAGO, JANUARY. 26, 1889.

No. 4.

## ORIGINAL ARTICLES.

### ON THE MANAGEMENT OF FEVERS IN CHILDREN.

*Read in the Section on Diseases of Children, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

BY JOHN A. LARRABEE, M.D.,

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In inviting your attention for a few moments to some points in the management of child fevers, I am fully aware that the subject is trite—that it has been thoroughly written by far more scholarly pens, and that in a texture so well woven it would be hard indeed to cull even a few threads of purely original thought. My apology, if apology be necessary, must be found in this—that it is not the rare and infrequent diseases which most perplex the practitioner, but oftener the most common departures from health. The phenomena which constitute a coryza are certainly familiar, but the treatment of a "bad cold" is an *opprobria medicorum*. No less familiar to our observation is the phenomenon of fever, and no more explicit is its etiology.

The object of this paper is to provoke a profitable discussion upon the mechanism of fever, to ascertain, if possible, the object which Nature designs to accomplish by its inauguration, and to determine what means are best calculated to promote that object and hasten the return of the patient to a state of health. The vast amount of literature, and the widely diverse views of the most celebrated authors, render it apparent that still more careful study is necessary before the practitioner at the bedside can answer these questions with entire satisfaction to himself or to others. The fevers of childhood known as the eruptive fevers, or exanthemata, require no separate allusion. As a class they have been observed through so many centuries and are so well understood that they shall form no part of this paper.

The existence of nerve centres in the brain and spinal cord, whose function is to preside over calorification, is universally acknowledged, if not conclusively proven. These centres, when disturbed, are found to be both excitant and inhib-

itory. Hence fever may occur either by an increase in heat production or a prevention of its dissipation. I see no reason why nerve force may not be transformed into heat, as in the current of electricity. The introduction of morbid material, in microorganisms, and their rapid reproduction within the body as a cause of fever, is also generally accepted. Fevers originating in poisonous effluvia have been properly called "pythogenic" by Murchison. If to this class we add those which are symptomatic, the classification of child fevers would be sufficiently extensive. We can no more conceive of an idiopathic fever than we could of an idiopathic hypertrophy of the heart or any other internal organ. Suffice it, then, that in whatever manner fever may be produced the process is the same, and denotes a resistance on the part of the body toward its enemies. The character of the fever and its duration also marks the constitutional vigor of the patient. As a general rule, those belonging to the sanguinonervous temperament are good fever patients, and those of a phlegmatic habit succumb more readily. Pain has been termed very aptly "Nature's alarm bell," and the interminable net-work of nerves of sensation has been wisely arranged for this purpose. Fever may be termed the red light of danger, and wherever this signal flashes it is a warning to go slow. The fevers of childhood are sudden in their occurrence, short in duration, and aside from involvement of internal organs or other complications, tend to recovery. By far the greater number are symptomatic in origin, and subside with the removal of the cause; such are denominated *ephemera*, or *febricula*. Fever, however produced, denotes the ability of the organism to fight the cause. There is much truth in the statement that "who caught up a fever can get well." In our search for extraneous causes we are apt to ignore the possibility of internal origin.

In my experience these constitute by far the most frequent causes of child fever. It is all very well to examine into the sanitary condition of our houses, to inspect the sewerage, the drainage, and ventilation, to be careful to sleep high and avoid dampness and marsh miasm—but there are thousands of individuals who are hypersensitive and hypocritical upon the point of house sanitation, whose bodies, the soul's dwelling, are defiled in



every possible manner. We read much of the consequences of choked drains, while we suffer the intestinal tract, the "cloaca magna" of our bodies, to be packed, and to germinate bacteria, and ptomaines more potent than marsh miasm in the production of fevers. We are hardly yet beginning to appreciate the consequences of chemical changes and fermentation within the body. The subject of egesta is as important as that of injesta, and the bacillus subtilis in the intestinal tract may yet prove as important for our study as the bacillus typhoideus now supposed to be the cause of fever. Moreover, all children are not alike prone to fever. What child physician has not become familiar with fever families? and upon careful examination the children will be found those whose diet includes luxuries and dainties, thus stuffing and clogging excretory organs, and excluding necessary and healthful exercise in the open air. To my mind it is possible to have such a complete and perfect action of the various functions of the body, that not only will not cause disease to exist within, but if these causes be brought from without into the body, they will be repelled. There can be no doubt that when the skin is kept in a perfect condition the interchange of gases takes place after the manner of the lungs. Elevation of surface temperature indicates a lung action in that part. A diagnostic point upon which I place the greatest importance in infantile pneumonia is, that the elevated temperature corresponds to the affected lung.

The care of the skin, both as to prophylaxis and treatment in fever, is second to no other consideration. It is now known in physiology that while every organ has its particular function, there is no organ which may not assume the duties of others, and that vicarious action is oftentimes the salvation of our lives, by which we escape the punishment of our own neglect. The ferments designed for digestive purposes may be changed into most virulent poisons, as they are themselves excrementitious. Hence the treatment of child fevers becomes at the same time the prophylaxis, and should include the following important considerations:

1. A greater abundance of pure fresh air.
2. Anti-thermic rather than a pyretic medication.
3. Careful regulation of the diet of the patient.
4. The daily ablution of the whole body in water at a temperature agreeable to the patient.
5. A forced dilution by frequent draughts of water or other fluids.
6. Very little medicine, and such medication to be restricted to the indications of nature in diseases.

#### IDENTITY OF REMITTENT AND TYPHOID FEVER IN CHILDHOOD.

All authorities agree that typhoid fever is ex-

ceptional in infancy, rare in early childhood, and becomes more frequent as we approach adult years. It is possible that statistics upon infantile fever may be considerably changed, especially between the ages of five and fifteen years, by a more careful observation of cases called remittent fever. It was at one time believed that rheumatism was a rare disease in childhood, until a trained observation overthrew the traditional "growing pain" of the nursery, and threw an important light upon the occurrence of serious cardiac lesions originating in infancy and childhood. It is to be regretted that no settled conviction exists in the minds of practitioners in regard to what constitutes a remittent and a typhoid fever in the child. Under the idea that typhoid is to be excluded at an age indefinitely fixed by statisticians, we find many excellent physicians conducting a case with all the anorexia and pyrexia, the characteristic tongue, the tympanitic abdomen, the ochre stools, and the delirium of typhoid fever, through fourteen or twenty-one days of time, under the diagnosis of remittent or simple continued fever; often as entero-colitis, and still oftener as a typho-malarial attack. It is not at all unusual in such cases to find that the diagnosis also has undergone several changes, entailing a useless if not a positively dangerous variation in therapeutics. If there be no practical difference between these diseases, why preserve the nomenclature? Strike the name remittent fever from the nosology of children's diseases. I am aware that a more careful study of disease naturally results in further division, but it would seem here that increased knowledge leads to a more complete concurrence of opinion that remittent, so-called, and typhoid fever in the child are synonymous. I cannot but think that such a simplification would result in a purer practice and a lessened mortality.

W. H. Day, in his excellent work on "Diseases of Children," writing upon typhoid fever, makes use of the following language: "I must disavow at once any belief in an infantile remittent fever as caused by a separate and distinct poison, or that the disease differs in its nature or causes from typhoid. I can conceive few greater blunders in practical medicine than to consider this a separate and distinct affection, not following the same course as typhoid fever, and not leading to the same complications." Further on the same author concurs in the idea that the term remittent fever should be limited to the mildest cases, which run a short course without developing the severe typhoid. Such cases have no rash and appear to be due to a depraved condition of the alimentary canal. Dr. J. Lewis Smith admits the similarity of the two diseases but endorses the existence of a remittent fever in childhood arising from dentition, worms and gastro-intestinal inflammation. The same author describes an essential remittent fever due to malaria, to which he devotes a very



short chapter. But under the head of typhoid fever, in his excellent treatise, we find the following suggestive sentence, "It (typhoid) is probably more common under 6 years than is commonly supposed." Dr. West is clear upon the identity of typhoid and remittent fever, while Hillier advises the term remittent to be ignored. Again there is no good reason for retaining the name remittent to be applied to a mild form of typhoid. What untold evil continues to result from the idea engrafted upon the laity that scarlatina is a diminutive? Do we not recognize grades of typhoid in adult practice? Not over eighty per cent. have the characteristic eruption. What grades exist between the "walking case" and the severer forms? Most of the writings upon remittent fever are so filled up with exceptions that they are entirely valueless to the practitioner.

We are living in a period of the world's history unprecedented in brilliancy. The developments made by the microscope and by vivisection are wonderful, and have revealed a previously hidden creation. The fabric of past theories of disease has been shaken from turret to foundation stone. Synthetic reasoning is prolific in theories, but no sooner do we seize upon one than it dies in giving birth to another. Cast upon the medical world decked in the gorgeous attire which genius alone can give, they dart across our mental horizon and go out in darkness. The microbial craze has seized upon our vital pathology while poor old lame and worn out therapeutics comes hobbling along in the rear, scarcely daring to breathe and ready to apologize for being in existence at all. We have indeed been led into new pastures, but not beside still waters. So far the treatment of fever by attacking the bacillus has not proven a success. Like the Hebrew children, we take our harps down from the swaying willows and turn our thoughts again toward Jerusalem.

Considering that fever is but the evidence of the warfare which nature has inaugurated against a foreign or domestic foe I prefer to speak of the management rather than the treatment of child fevers. The maxim which I endeavor to keep before me in child practice, "Childhood is a period of life requiring the greatest amount of knowledge and the least amount of medicine." If, as I know is true, I use less quinine among children than my fellow practitioners it is because I have found it unnecessary when a careful attention has been paid to the secretions and excretions. There are certain well-known requirements in the management of a fever which accepted by all are followed by none: A large airy chamber—if possible an upper room—with free ventilation, an exposure to sunlight, an abundant supply of fresh water for bathing and drinking, a very light diet, and a kind and obedient nurse.

If, as is commonly the case in children, we are called early for the anorexia preceding the fever,

or in the first week of typhoid, the following routine is ordered: an effectual evacuation of the stomach by ipecac and warm water, followed by hourly doses of  $\frac{1}{16}$  gr. calomel for 24 hours; a warm soap and water bath, a regular soaker; clean linen and underwear, both on person and bed. This occupies two days of treatment, and when well done one-third of the cure has been effected. If the fever be an ephamera or febricula often the entire cure is accomplished. If at this stage there is still a doubt as to the fever being malarial and not typhoid, I order suitable doses of muriate of quinine perfectly dissolved in muriatic acid and syrup of orange; this is administered in such doses and intervals that malarial complications may be left out and a diagnosis arrived at early. So soon as this fails to control the fever—and it becomes apparent that we are dealing with the specific cause—quinine should be stopped, nor should it again be given until convalescence may call for its tonic action. A tumbler of water containing dilute muriatic acid is placed near the patient and sipped occasionally through a bent glass tube, and the fever coil is applied to the head if restless. Food is not urged, but it is necessary not only to allow but to urge that frequent draughts of water be given, and along with this I use very small doses of morphia or opium throughout long-continued fevers, especially in typhoid. I find that small doses of opium stimulate the brain and support the nervous system far better than food, while many authorities agree that the elimination of urea is increased by it. There is no medicine in typhoid equal to small, very small, doses of Tully powder when symptoms of restlessness or delirium are present.

#### REDUCTION OF TEMPERATURE IN FEVER.

Fashion rules in medicine no less than in society—to be out of fashion is to be out of the world. History repeats itself, and no sooner does the great pendulum reach the utmost limit than it begins to sway slowly backward. Abandoned remedies become new, and old exploded ideas are again worshiped at our shrine. A few years ago the medicine man at the bedside of a little sufferer had but one thought, and that was temperature. Society meetings developed into a few patient listeners to long lists of hourly thermometric observations, in which all other symptoms, even the disease itself, was lost sight of. The temperature man with his lengthy tables has had his day, and we instinctively take a full breath of comfort in the belief that he will not return.

I have no doubt that very many persons have succumbed to the Don Quixotic fight waged against temperature alone. It is an extremely hard pull if the child has to contend against two forces: the specific poison of the fever and the toxic action of medicine. I hope no one will infer from these sentences that I have discarded the

fever thermometer, on the contrary, I rely implicitly upon its teachings; I use it just as an experienced seaman would use the lead, not in plain sailing but when approaching a lee shore. The minute predictions which some doctors are able to make by degrees and fractions upon a thermometer is suggestive of a story I once heard of a Nantucket sea captain who could tell his soundings and fix the exact position of his ship by the smell of the lead. One of his crew wishing to test the old man's power of discernment carried the next voyage, some ground dug from his own garden. When, after the voyage, the ship was returning and the lead was ordered to be thrown the sailor opened the sack and rubbed the lead in it before taking it down to the cabin. "Great Heavens!" exclaimed the captain, "Nantucket has sunk and we are at this moment over old Nancy Hackett's garden."

Hydrotherapy reaches its maximum of usefulness in the fevers of childhood. The greatest possible extremes, however, have been reached in the application of cold. Such frigid packs as are recommended by authors in Ziemssen are certainly opposed to what we know of heat production and heat laws. It is not surprising that they have found so few advocates in our day. Driving the heat from the surface is no more reducing the temperature of the blood than surrounding a fire by a wall is reducing the heat within the furnace. Any application of cold which causes a continued horripilation of the skin, must necessarily produce internal congestion, and the statement made by advocates of the ice pack, that such complications as bronchitis and pneumonia would have occurred independent of such application must be taken *cum grano salis*. In children moderately ill of fever a warm bath should be given daily, preferably in the evening. In those who are too ill to be removed from the bed, the warm wet pack is to be preferred. So great is the benefit accruing from filling the cutaneous vessels and the sedative effect of moist vapor upon the nervous system that anodynes are unnecessary. The same procedure is equally beneficial in acute infectious diseases.

That dimethyloxy, quinizin, antipyrin, and acetanilide are able to reduce fever heat no longer admits of doubt. The *modus operandi* is a matter of more important consideration. It has been established by numerous experiments, that antipyrin and antifebrin inhibit the organizing power of the blood corpuscle. In this strangulation the latter is far more powerful. That this explanation is not alone able to account for the action of these wonderful drugs, is shown in the fact that other agents possessing still greater power are found to be less efficacious. I am convinced that all the compounds of phenol and salicylic acid, the chinoline derivatives, exert an anaesthetic effect over the heat centres before

mentioned. It is easy to conceive how drugs which interfere with oxygenation and which cause the oxyhæmoglobin to be replaced by metahæmoglobin can become dangerous. Neither of these drugs should be used in the consolidated lung of pneumonia or pushed when there is evidence of retained carbon dioxide in the blood. In uncomplicated typhoid I regard antipyrin safer and more efficacious than gelsemium, aconite or veratrum. I know of no advance in therapeutics of more practical importance than this: that with the same agents with which we reduce temperature we allay pain and quiet reflexes without the use of narcotics.

Practically I have obtained the finest possible effect from the phenate of ammonia in the fevers of childhood. I have made very extensive use of the preparation known as M. Deplat's Sirup Ammonia Phenique, both in the gastric or fermentative fevers and in the several forms of typhoid; and I can certainly substantiate the claim made by the manufacturer of nascent phenic acid to be well founded. I am satisfied that Drs. Jackson and Barnett, of Wisconsin, and M. Robins, of Paris, are correct in the statement that according to the accepted theory of heat production in fever, ammonia is the proper base for phenol and salicylic acid. I have never met with as good results from prescriptions filled at drug stores where ordinary carbolic acid is dispensed. Phenic acid requires not only great pharmaceutical skill in its manufacture, but also in its preservation in the nascent state.

#### ALCOHOL IN FEVERS.

The want of definite knowledge of the action of alcohol in the system is productive of very serious errors in its use in fevers. Prof. Austin Flint in his most admirable and exhaustive address before the Ninth International Medical Congress, devotes much space to the good effects of alcohol in the treatment of fevers, and places great stress upon the wonderful tolerance presented by the patient, making this tolerance the guide to the quantity to be exhibited. His words are, "that in fever, only such quantity of alcohol as is readily oxidized is useful," also that its use is "to supply heat and save waste of tissue in fever." "It is not unusual," says the same author, "to administer from sixteen to thirty-two ounces of brandy in twenty-four hours." Bartholow says, that from one ounce to one and a-half ounces may be oxidized under twenty-four hours. The excess must be eliminated as pure alcohol and acts as alcohol upon the nerve structures and tissues. Alcohol is a food only in the most restricted sense of that term. As a stimulant it is often needed and I do not hesitate to use it under such indications. It is rapidly followed by depression, and requires as much care and judgment as the more dangerous medicines. Ger-

mental tissue is killed by alcohol, and I have never seen a child fever treated by alcohol which I thought could not have been better treated without it. The claim that alcohol in enormous quantities, saves life in snake bite, dissection wound and diphtheria is based entirely upon its stimulating properties and not upon its apyretic action as a respiratory food. All that ought to be said of it in fevers is, that when indicated as a stimulant in grave atony, its use is not contraindicated by the high temperature present. Diluted with water and sponged upon the naked body, it is certainly beneficial in abstraction of heat, and the same effect is delightfully refreshing.

#### FEEDING IN FEVER.

Nothing pertaining to the treatment of fever can be of greater importance than diet. Few doctors are sufficiently explicit in their directions. It is a subject which has been characterized by the greatest possible extremes. It is possible that in olden times patients were starved to death by the doctor; and it is equally true that in the attempt to reform this treatment hundreds and thousands have died of over-feeding. The desire expressed by Graves, that his epitaph should be, "he fed fevers," is as likely to perpetuate error as truth, and the injunction, "Don't let your patients die from starvation," does not preclude the idea that they may be killed by over-feeding. Dogs may be prevented from going mad in August by killing them in July. The danger at present is entirely in the other extreme to which we have been carried by gazing upon the spectre of inanition. Nothing is more common than to find the young and inexperienced practitioner stuffing a fever patient one hour with quantities of milk and egg-nog, and the next with beef-tea and peptonoids and bovine, and the next with medicine, until it is impossible to find an unoccupied hour for sleep. Actually the amount of food fed to fever patients under the dominant idea of preventing exhaustion, in a single day, would be sufficient to sustain the life of a well child for a week. I have seen children ill with typhoid fever suffering from retained curds of milk cheese as large as my fist at a time when danger from intestinal ulceration was imminent. Their cries from pain being attributed to tumefaction, opiates would be freely used to restrain the action of the bowels. I have never seen any good result from forced feeding in typhoid fever. It is granted that fever produces certain changes in the digestive organs rendering the assimilation as well as the digestion quite impossible. Such changes are noted in the peptic glands, pancreas and liver, while the saliva—the first essential—is wholly inadequate to do the work of ptyaline.

Upon this point Dr. Flint says: "The practical skill of the physician is taxed to the utmost in individual cases to overcome these difficulties; but

*the judicious administration of milk, eggs, farinaceous articles, meat broths, meat essences, etc., is always productive of good results."* With all due respect for the distinguished author, I *must differ*. Here, again, let us interrogate nature more closely in regard to this diminution in the digestive and assimilative function—whether or not these changes are not also conservative. It is granted that one of the principal dangers in typhoid fever is the poisoning of the system with the product of histolysis. Are we lessening this burden of the kidneys by adding to the ozonized waste? It is claimed that the hydrocarbons should be freely given to supply respiratory food and aid in the production of heat, and then alcohol is at once the most acceptable form in which to effect an entrance of hydrocarbonaceous food into the system. At the same time experiments prove alcohol to paralyze the ozonizing power of the blood corpuscles. The subject of lithæmia in fevers is certainly an important one, the study of which is calculated to greatly modify our idea of feeding. It is commonly stated that fat people have a more intense pyrexia than those who are wanting in adipose tissue, a statement which my observation in child fever has not confirmed. And if fat were an objection as supplying food for the fever, how can we reconcile this argument with the idea that we ought to feed hydrocarbons in fever?

In phthisis the blood corpuscles are cut down to suit the requirements of the lung in supply of oxygen, and any attempt to reinstate them by administration of iron while the capacity of the lung remains crippled is followed by increased irritation and injury. When in the aged the arteries become brittle by deposition of earthy material in their coats, do not we see, *pari passu*, with such change, fatty degeneration of the heart muscle? and is not this a wise provision of nature against rupture of such blood-vessels? If we were to mistake nature's object in this compensation, retrograde though it be, and administer digitalis, would we not precipitate the danger? I must confess to a more careful study into such provisions of nature the older I grow in medicine, and I heed them more.

In one accustomed to pay some respect to the appetite in fevers as a guide to feeding, I offer a limited quantity of milk, preferably buttermilk or skimmed milk, and if not willingly taken, wait. As to beef-tea, there is not a pound of nourishment in a ton of the stuff. Five grains of nitrate of ammonia in a tumbler of water discounts beef-tea.

The power of common salt in promoting cell activity and osmosis ought not to be lost sight of in long continued fever or illness of any kind attended by wasting. I always feed salt in the milk or water in sufficient quantity to secure this result and prevent indigestion of the little food allowed. With children sick with typhoid I have found

Mellin's an excellent food. I use it with milk and barley-water, and find that it is relished and digested.

#### QUIET.

It is estimated that life may be sustained independently of food and water for six or eight days—with water without food very much longer. If, however, muscular exertion be added, death will more rapidly ensue. Muscle glycogen is an important element, and in order to husband the forces reserved by the body for these emergencies, perfect rest must be enjoined. The wasting in typhoid is of muscular fibre, preserving the adipose tissue to a great extent uninjured. In consumption the reverse is the case, and the fats are absorbed. Sudden death from cardiac failure is the penalty of exercise or exertion, even when the patient is convalescent.

Finally, the selection of a good tonic for the convalescent stage of fever is often a matter of importance. Ordinarily the return to health after the fever poison has expended itself is rapid and permanent, and the emaciation of the body is rapidly made up to a point of plumpness exceeding that from other illness. The return of appetite indicates that nature's best tonics will be borne, and air, exercise and diet begin to demand attention. In many cases, however, the appetite is capricious after the tongue has become clean, and there are other evidences of damage from the struggle. No tonic has accomplished so much at this time as the citrate of iron and ammonia given in infusion of columba.

Previous to its discussion a vote of thanks was extended by the Section to Dr. Larrabee for his valuable and timely paper, and it was referred to the Committee on Publication with the request that it be printed in *THE JOURNAL* at an early date.

DR. JENKINS remarked that he was greatly interested in Dr. Larrabee's paper. There were two points upon which he wished to speak. *First*, as to the identity of infantile remittent and typhoid fevers: Twenty years' experience had led him to believe that remittent fever in the child, as in the adult, is frequently malarial. Children are more susceptible to malarial influence than adults, and often have remittent fever from a malarial influence only sufficient to cause intermittent fever in adults. He thought typhoid fever quite frequent in childhood and even in infancy, but entirely distinct in its etiology and different in its clinical history from remittent fever. Febrile movement is very readily induced in infancy from indigestible food, cold, etc., and is frequently remittent in character, but it is not of specific origin, and therefore neither malarial nor typhoid.

*Second*. He most heartily agreed with the paper as to the importance of restricted diet and abun-

dance of water in the fevers of infancy and childhood. Infants with fever nurse more frequently, in consequence of thirst, and water, not food, is demanded. The stomach is overloaded and fermentation induced, invariably increasing the febrile movement, and favoring the development of eclampsia, gastric catarrh, etc. A restricted diet is of special importance during the first week of typhoid, while there is hyperæmia and infiltration of the Peyerian glands. Excessive feeding at this time increases the engorgement and causes a greater amount of necrosis. It is after the first ten to fourteen days, when the fever is partially free from the absorption of septic elements from ulcerating surfaces, that sustaining treatment by nutritious and easily digested food given at frequent intervals, together with stimulants and tonics, is of great value.

DR. JOHNSON said typhoid fever does not always follow a prescribed course and is not always of a severe nature. He uses quinine early to aid in diagnosis, and then discontinued its use. He also substituted water for milk.

DR. LAWRENCE wished to defend the young and inexperienced men in the profession from the damaging assertion that they stuff their patients with milk, beef-tea, gruel, etc., giving nature no time for that rest which she so much requires. Thinks the younger man less liable to forget his physiology and commit so great an error, than the one on whose head has fallen the snows of many winters. He then spoke of the superiority of cold as a therapeutic agent in the reduction of temperature. Did not advocate the symptomatic treatment of fevers. Uses arsenic in preference to quinine in malarial fevers of children, on account of its being well borne, of a pleasanter taste, and the certainty of its effect.

DR. BOYCE would add his testimony to the value of antipyrin in typhoid fever, also would corroborate the paper in its entirety. He too used quinine as a diagnostic agent.

DR. CHRISTOPHER said that the results of the recent investigations of the blood in malaria had proved that the diagnosis of this disease could now be made with ease and certainty by the microscope. Not so, however, in typhoid fever, since the cultivation of the bacillus of typhoid is so tedious and difficult. During the past fall and winter Cincinnati had been visited by an epidemic of typhoid which appeared first among children. He had, in this epidemic, three cases in children under 2 years of age—18, 14 and 9 months of age respectively. In all these the disease pursued a typical course of about two weeks' duration. The usual eruption was present and all had sordes on lips. The disease was modified according to the age of the child, the bronchial symptoms being more prominent, with corresponding involvement of the large intestine, so frequently seen in bronchial catarrh in young children.

## EXPLORATORY LAPAROTOMY.

*Read in the Section on Surgery, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1885.*

BY HENRY O. MARCY, A.M., M.D., LL.D.,  
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The safety of laparotomy by modern surgical methods has so greatly increased the utility of the operation, that the time has arrived when it may be advantageously discussed as a means of diagnosis. Although the clinical differentiation of abdominal disease has been much advanced in later times, it is clearly conceded by those of the widest experience that many important conditions can only be approximately determined by all the other means at our disposal.

As if in mockery of my own views, only within the week have I made two autopsies upon my own patients which serve pointedly as an illustration. The one, a sufferer from obscure abdominal symptoms, died from a sudden hemorrhage caused by the rupture of a post-uterine vascular growth, which could have been diagnosticated in no other way than by exploratory section. The second, a chronic sufferer for months from severe local pains about the pylorus, where the diagnosis of an eminent consultant, as well as myself, lay between impacted gall-stones, or cancer. Symptoms of an acute peritonitis supervened, causing death in a few days. This, viewed in the light of an autopsy of a week previous, where somewhat similar symptoms had been produced by an actively developing cancer, seemed to settle the case as malignant. To our utter surprise, the post-mortem revealed an acute appendicitis caused by a focal concretion which had supervened with ulcerative perforation as the cause of the acute peritonitis. A stenosis of the pylorus was found, caused by old adhesions about a degenerated gall bladder, full of concretions, but this had nothing to do with the immediate death of the patient.

We have all of us, in our years of experience, more or less often met with abundant illustration of the uncertainty and obscurity which marked the progress of the fatal issue from intestinal obstruction, tymphlo-enteritis, extra-uterine foetation, abdominal tumors, etc., and, until recently, considered we had exhausted our skill in symptomatic treatment, where the autopsy has shown, could we have known earlier the changes taking place, surgical aid might have saved life and restored health.

The dangers attendant upon laparotomy are still considered so great, and the fear of results are so fixed in the general opinion of the profession, that it is yet looked upon as a *dernier ressort*. Most of us in middle life have watched the development of the operation almost from its inception, and some keenly remember the opposition, which assumed even a personal type, in daring to put into execution our convictions.

In the development of modern surgical methods,

the experience of the profession is now sufficiently ample to warrant a revision of its teachings, and the object of this paper will be accomplished by your active participation in the discussion of the subject, to which I contribute the following report of laparotomies, which includes only and all the cases where I have opened the abdomen, and finding conditions which did not warrant further operative measures, closed without surgical interference.

*Case 1.*—Female, æt. 30. Opened abdomen in 1880. Interstitial myoma. Five years since it first gave the patient trouble. Filled pelvic basin. On account of the vascular supply, deemed it unwise to remove ovaries or growth. Recovery easy and rapid. Patient living and far more comfortable since.

*Case 2.*—June, 1885. Child, æt. 4 years. Seen in consultation with Dr. Adams of Framingham, and aided him in operation two days later. Case supposed malignant, acute. Temperature 105°, pulse 150. Suffering severe, abdomen distended with fluid looking like pus, odorless, creamy, which, on examination, was shown to be a pure development of micrococci (after cultured to several generations). Operation determined upon because of character of fluid. Abdominal cavity carefully washed out with a weak mercuric bichloride solution. Perfect recovery followed. Patient living and growing finely.

*Case 3.*—May, 1886. F., æt. 60. Slow development of an enormous abdominal distention. Uterine myoma filled the pelvis, but diagnosis uncertain. Fifty pounds of fluid removed. Recovered from operation and was greatly relieved, but died a few weeks later.

*Case 4.*—Nov., 1886. Male. Subject to frequent attacks of illness, with great pain in region of appendix. Temperature reaching to 104°. Localized soreness and tenderness. Appendix not involved, but bands of adhesion at head of cæcum were divided. Recovery complete, followed by a gain in weight of over thirty pounds. Remains well.

*Case 5.*—Nov., 1886. F., æt. 30. Under observation in hospital for some months. Severe pain and emaciation. Uterus fixed. Perhaps a case of old tubal disease. Laparotomy showed disseminated tubercle mesenteric and over the abdominal walls. Resected a small portion for examination. Washed out with mercuric bichloride solution and closed the abdomen. The miliary masses proved to be colonies of tubercular bacilli, and cultivations were made which reproduced true. Recovery followed, with an improvement of all symptoms. Patient sailed for Europe the following spring, and in a letter under date of August, 1887, she writes, "Am enjoying at present very good health, being able to work again."

*Case 6.*—February, 1887. Female, æt. 28.

Patient confined to bed with severe abdominal pains. Tumor on right side, reaching nearly to umbilicus, accompanied with many of the symptoms of pregnancy. Uterus evidently merged in the growth. Proved an ectopic pregnancy. Closed the wound. Miscarriage followed. Recovery complete and patient remains well.

*Case 7.*—April, 1887. F., æt. 30. Patient ill four weeks. Tumor on right side, growing rapidly. Exploration revealed cancer of omentum. Closed wound. Autopsy later showed round cell sarcoma. Thought result not materially changed by operation.

*Case 8.*—April, 1887. F., æt. 33. Pulse and temperature high, with severe pains caused by a tumor of right side extending to umbilicus. Although from subsequent history probably cystic, it was found everywhere adherent and judged malignant. Patient still living, but for the most part confined to the bed for the year. Tumor increasing in size, and again I have advised exploration with the hope of removal.

*Case 9.*—July, 1887. Dr. W., æt. 72. Sufferer for years from gall stones. Now *in extremis* from biliary obstruction. Laparotomy and found adhesions to ascending colon and the parts about. Could feel and probably dislodged, in a measure, a calculus, size of a walnut. It was thought not safe to proceed further, so closed the abdomen and improvement followed for a short period. Wound healed perfectly. Symptoms of obstruction returned and death supervened within a month. Autopsy showed a large impacted calculus and conditions which warranted the conclusion that the duct adhesions prevented a safe removal.

*Case 10.*—August, 1887. Boy, æt. 12. Perityphilitis. Freely separated adhesions. Patient recovered well from operation. Wound healed. Death about six weeks later from undetermined cause. Autopsy showed the intestine unobstructed, and only delicate bands to determine place of the extraordinary plastic effusion.

*Case 11.*—October, 1887. Child, æt. 2. Temperature 104° and pulse 140 to 150. Opened and washed out a large pus cavity involving appendix, drained. Improvement most marked from time of operation. Some weeks later enlarged the incision on account of return of fever, etc. Closed a fistula of the bladder by a continuous tendon suture and two openings in the large intestine which admitted finger, also the abdominal wall. Recovery complete and rapid. Child growing finely, and seems as strong as before her long illness.

From this report it will be seen, although the list of cases is small, that life was not seriously endangered by the operations, and in more than one instance, although seemingly only exploratory, the recovery was dependent upon the surgical interference. To write the opposite side of my experience would be to narrate a long series reach-

ing over more than twenty years of active clinical study, where the post-mortem revelations have taught the shortcomings of our art, and with regretful sadness caused us, at least, the contemplation of what might have been.

I am well aware that I am not alone in the consideration of exploratory laparotomy as to the views taken of the subject in this brief paper. Prominent among the contributions upon this subject, I take pleasure in citing an able article recently written by Dr. T. Gaillard Thomas, of New York City. In the light of the criticisms of a certain considerable and highly respectable class of the profession, raising the protest against what they deem an unjustifiable resort to laparotomy for abdominal disease, I can but believe that it emanates, as a rule, from men only theoretically interested in the subject. Of the quite large number of surgeons, in Europe as well as America, with whom I am personally acquainted, I know of no men more conservative in opinion, or who review with greater care and precision the premises upon which they base the advisability of operative interference, and only a long experience and extended observation has led them to accept exploratory laparotomy as, at times, the only means of a correct diagnosis.

Let us hope those younger in the profession who have entered upon its labors under more favorable auspices, will take heed to such warning, profit by the lesson it teaches, and remember that the future, if not the present, will regard the sins of omission in the same stern light as those of commission.

## HYDRIODIC ACID. ITS USES IN GENERAL PRACTICE.

*Read in the Session on Practical Medicine at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, May, 1888.*

BY WM. C. WILE, A.M., M.D.,

EX-VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION;  
MEMBER OF THE BRITISH MEDICAL ASSOCIATION; EDITOR  
OF THE NEW ENGLAND MEDICAL MONTHLY, ETC.

The difficulties which were in the way of the use of hydriodic acid because of its rapid decomposition, were considered so unsurmountable, that it was not until the year 1878, when an unalterable syrup was presented to the profession, that it came into use. Soon after this, in 1880, my attention was attracted to an article by Dr. J. B. Oliver, of Boston, which was published in the *Boston Medical and Surgical Journal*, of the issue of March 4th of that year.

Dr. Oliver, in his paper alluded to the use of syrup of hydriodic acid, in the treatment of asthma, and in conclusion says, that Dr. Knight "had surprisingly satisfactory results," from the same remedy. Having under observation at this time a severe case of chronic asthma, complicated with chronic bronchitis, on which I had



tried iodide of potassium, which was intolerable to the stomach, I at once put the lady, a woman of 49 years, upon the syrup of hydriodic acid. The effect was all that could be desired. There was an almost immediate relief from the asthmatic conditions, rapid amelioration of the cough, decreased expectoration, which was very profuse before the exhibition of the remedy. The sputa which was thick and viscid, became thinner in character, and my patient's general health commenced to improve, and after three months of the use of the syrup of hydriodic acid, in increasing doses till two teaspoonfuls were taken three times a day, complete recovery took place, and from that time till her death of pneumonia two years later, had no relapse. The results in this case were so satisfactory, that ever since it has been my favorite remedy, *in all* asthmatic troubles, and though every case has yielded promptly and effectually as this one, still, I have never administered it in this class of diseases, without unmistakable evidences of relief and comfort. In chronic bronchitis of long standing, in my hands it has produced most excellent results, and can be given when the iodide of potassium cannot for a moment be tolerated. The cases which seem to derive the most benefit from this remedy, are that class of long standing bronchitis, when the lung seems about to take on a deeper seated and less tractable form of disease.

My attention has been frequently called, in the treatment of chronic bronchitis with hydriodic acid, to the fact that small doses, frequently repeated are of signal service, when larger doses do not seem to accomplish the same results. In fact, from long experience, I would suggest the constant use of the syrup in small doses, 15 drops, gradually increased a drop a dose, until the point of toleration is reached, in order to get the most satisfactory and lasting results. While practicing at Sandy Hook, Conn., I had the opportunity of observing its action in lead poisoning, in a great many cases, lead entering largely into the compounds which are mixed with the crude rubber during the process of manufacture. I depended almost entirely on the syrup of hydriodic acid for all forms of chronic lead poisoning. In lead paralysis, this remedy combined with keeping the bowels quite free, and the application of the Faradic current were the only means employed, and always with satisfactory and oftentimes surprising results. Wrist-drop and chronic abdominal pains would yield to the remedy, combined with saline cathartics. In scrofulous diseases, of children especially, does the hydriodic acid seem to produce most marvelous results. In infantile eczema, enlarged glands, cold abscesses, indolent sores, treated with small doses gradually increased until it is all that can be borne, will prove a source of great gratification to the patient, and gratitude towards the doctor.

At the suggestion of my friend, Dr. F. A. Burrall, of New York, I am using it in a case of obesity, with the result of steady diminution of the amount of fat, without a single disagreeable symptom, or interference with the general health, or the action of any of the functions of the body. In hay fever it has been used by other observers with good results, but my own experience with its use in this disease has been *nil*.

It is hardly necessary for me to more than say, that in all the latest stages and manifestations of syphilis, it has yielded its most magnificent results. Pleasant to take, rapidly pushed to large doses, I have found the most pronounced and favorable effects. Patients take it readily, and the improvement is so rapid and immediate, that they need no urging to continue its use for as long a time as the doctor deems desirable.

My paper has now reached the limits which I prescribed for it, but I cannot resist the temptation of recording briefly three of the most unique cases of my experience with this drug. The one was a man 42 years of age, who was a paper-box manufacturer, suffering from arsenical poisoning from the inhalation of arsenical dust arising from the glazed paper which he handled and cut. After repeated trials of other remedies, the syrup of hydriodic acid made a complete cure inside of a month.

In Danbury, the city in which I now reside, they make large quantities of hats; in fact, it is said that at least one-half of the hats made in the United States, are made in that place. To preserve the fur, "carrot" is used, which is composed largely of mercury; consequently, many of the hatters working in the plank-shop suffer from mercurial poisoning, and many from mercurial tremor and paralysis. No remedy has proved of so much value to me as the hydriodic acid. Always prompt in its effects and reliable in its results. The last case was one of chronic rheumatism in a man 37 years old. He was almost a complete cripple in his hands and feet, and had not done a stroke of work in two years. I had exhibited every remedy known to me, including electricity, massage, Turkish baths, colchicum, etc., but until I commenced the use of the hydriodic acid, no permanent improvement was made. After continuing its use for four months the patient seemed, and was to all appearances entirely well. For fear of relapse, he continued taking it for two months more, in order as he explained it, "to make assurance doubly sure." I do not believe that this remedy is enough understood, or the advantages it possesses over all other forms of iodide as thoroughly appreciated as it should be; but of this I am assured, that it will be tolerated by the stomach many times, when no other preparation of its class can be retained, and do work that none other will. It is scarcely necessary for me to



state, that I have never used any other preparation than that of the originator of the unalterable syrup, of Mr. R. W. Gardner, of New York.

### THORACOPAGUS.

*Read before the Medical Society of the District of Columbia, June 13, 1888.*

BY D. S. LAMB, M.D.,  
OF WASHINGTON, D. C.

I present, herewith, a double monster, known as a *Thoracopagus*. It was procured by Dr. E. C. C. Winter, who placed it in my hands for a few days. The mother was a young negro, and this was her first pregnancy. She stated that so far as she knew, there had been no deformity nor even twins in the family history of her husband or herself.

There is but one umbilical cord; for which reason the monster has been also called *omphalopagus*. There are two distinct heads and necks, and as is usually the case, one is smaller than the other. Indeed some writers affirm that one of a double monster is *always* the smaller. The bodies, otherwise than the heads of this specimen, do not show any marked difference in size. On one side the limbs are separate and perfect, on the other the arms coalesce, though from a superficial examination, I conclude that two sets of bones are present; the hands are separate; on the same side the lower limbs also are united like the arms, while the toes are separate, except that the great toes are fused. The trunks are joined a little to one side of the middle line, though no doubt the actual bony junction is by the sternum; whence the monster gets its name *sternopagus* or *thoracopagus*.

Dissection not having been permitted as yet, we can only infer the arrangement of internal organs from what is usually found in these cases. The heart is probably double; the alimentary canal is very likely in part common to both segments; the liver doubtless double, but the two organs joined by process of gland substance. The position of the anal openings is represented by two teat like prominences in the normal situation; while the genitals appear as two similar prominences in juxtaposition, and behind each of them a small opening. Doubtless females.

The size of the monster would indicate an age of about five months.

Although this specimen is the commonest kind of double monster, yet the shelves of the Army Medical Museum show but one specimen of this kind.

There are other specimens in which the fusion has also included the head; others in which it has included the face; others in which the head only is involved. Out of over twenty specimens, only two are human; a *thoracopagus* and a *proso-*

*polthoracopagus*; one of these was contributed by the Medical Faculty of Columbian College of this city, in 1867.

There are besides, however, a number of specimens in which one of the two segments of the double monster is much smaller than the other, so that it appears parasitic. There is an *acardiacus acephalus*, which was presented before this Society some years ago by Dr. Harrison Crook of this city. It may be called a placental parasite, because the parasitic segment which is without head or heart, and hence the name it bears, was connected to the same placenta as the antosite or host and depended upon the latter for its circulation. There is also a specimen of *thoracopagus parasiticus* from the human subject, a cast from the Warren Museum of Harvard University; and represents an infant which lived to the age of five months and had a parasitic infant, devoid of head and neck, and with only part of the trunk, the heart being absent, joined to the thorax of the host.

There is a specimen of *cephalo-thoracopagus parasiticus*, that is to say, fusion of both heads and thoraces. This was contributed by the Medical Faculty of Columbian College of this city in 1867. There is also a *teratoma* from the late Dr. Joshua A. Ritchie of this city. There are also specimens in which the duplicity is either anterior or posterior only. Altogether the collection is fairly representative with desiderata, however, especially in the matter of the human subject.

I put this matter in this shape to emphasize the desirability of making the collection, already valuable, even more so, by rendering it more complete; and for this purpose to enlist the interest of the members of this Society. I would add that all of the information I have given in regard to these museum specimens can be verified by any inquirer from the labels attached thereto.

The most interesting question, perhaps to all of us, is that of causation. What is the preponderating opinion now among investigators as to the cause of these monsters? I will try briefly to present the matter to you.

In the first place, since a monster may be single or double, it might be inferred, and truly, that the cause of the one was different from that of the other. Single monsters show arrest of development, or an absence of one or more parts. It is therefore called a monster by defect. Sometimes, however, there is instead, a deviation in structure or position of a part, as shown in transposition of the viscera of the thorax and abdomen. On the other hand, double monsters show us a fusion of two nearly similar individuals; or one of them may be poorly developed and therefore parasitic; or lastly, particular parts may be doubled or simply hypertrophied.

The cause must be one of two, unless it be both; namely, either inherent and inherited in the

ovum, or external. The probability seems to be that the influence of heredity in malformations is small; and chiefly limited to cases of slight importance, as hare-lip, cervical fistula, and excess of fingers and toes. Ziegler says: "The pathological peculiarities transmitted congenitally from parent to child manifest themselves less in anomalies of external form than in deficient or perverted function of the tissues, or in morbid predispositions. Such anomalies are to be detected only by minute anatomical examination, or they are incapable of anatomical demonstration at all."

In single monsters the cause may be usually set down as being either from disease or injury of the uterus or of the foetus; or possibly, at times, both. As to the uterus, there may be defective development or disease of the membranes; adhesion of the amnion to the foetus; abnormally small quantity of amniotic liquor; tumors of uterus; concussion of the uterus with separation of membranes; or hemorrhage into the membranes or their vicinity. As to the foetus, there may be inflammation transmitted from the mother; there may be inherited diseases, as syphilis; or there may be in the early stages of development, abnormal flexures.

These causes act either mechanically by simple pressure; or they hinder the circulation of the foetus; or directly destroy the parts involved, as in inflammation. More than one cause may act at the same time. The effect is usually as stated, arrest of development.

A very interesting point is the period of embryonic life at which the cause acts. The earlier the injury, the greater the effect; the loss of a few cells at an early period may involve the loss of a limb, but at a later period, may have no appreciable effect. Since the general form of the body is defined by the end of the third month, malformations, strictly speaking, should originate within that time.

We study double monsters from a different point of view. We go back to the blastodermic vesicle and find there two embryonic areas instead of one. In the segmentation of each of these areas, neighboring cells of the two may mingle to a greater or less extent and a double monster be produced. Or in place of two separate rudiments, we may have a cleavage of one mass of cells; complete or partial cleavage; the two masses thus formed may partially reunite, the result being the same as fusion of two separate rudiments. It seems to me that the weight of opinion is with the doctrine of cleavage. Two primitive streaks may appear in the same embryonic area, and subsequently two medullary grooves; these may remain distinct or may become partly blended. We may also suppose a primitive streak to remain single while the medullary groove is duplicated. In any case we assure a duplication of parts which are ordinarily single.

The cause of such cleavage is unknown. Marchand adduces observations on invertebrates which makes it probable that the admission of two spermatozoa to one ovum may lead to the formation of two centres of segmentation. Gerlach tried to produce double monsters by varnishing eggs before incubation, leaving uncovered only a Y shaped space over the region of the primitive streak, and succeeded in obtaining one case of anterior duplicity.

I might add that malformations have been produced by varying the temperature of the incubator; by raising the temperature too far above the normal; by varnishing the eggs; by placing them vertically; by prolonging the interval between the laying and incubation of the eggs.

Since we observe the same kind of malformations in the lower vertebrates as in the human subject, it follows that, the laws must be the same, and what is demonstrated in the former must inferentially hold good in the latter.

In conclusion I desire to suggest what has doubtless occurred to many others. It is this: The ancients constructed a mythology and, as the modern idolators, made images of cyclopan, and many headed, many breasted and many limbed figures. I do not think that they drew entirely on their imagination for these figures. I would rather think that they have copied from those single and double monsters which they must have repeatedly had before them from the various parts of the animal kingdom. The ignorant mind has a peculiar dread of such monsters and is even to-day disposed either to deify or demonize them.

#### A PATHOLOGICAL CHANGE AT THE BASE OF THE TONGUE, POSSIBLY EX- PLAINING CERTAIN SO-CALLED FUNCTIONAL DISEASES OF THAT ORGAN.

*Read before the Medical Society of the District of Columbia,  
October 10, 1888.*

BY C. W. RICHARDSON, M.D.,  
OF WASHINGTON, D. C.

During the last decade the advance in laryngology has been so great that the number of cases of nervous origin, or functional, has been so vastly reduced that the so-called nervous and hysterical cases are becoming rather limited in their number. It has only been within this period that attention has been called to several important pathological lesions situated at the base of the tongue giving rise to symptoms which seemed never to be relieved by the methods of treatment previously in vogue but now completely cured, enabling us to relegate a large number of so-called nervous cases to their proper sphere. It is in hope, by calling attention to some further changes in this organ,

of still further reducing the number of nervous cases that I present the following paper. We recognize, most thoroughly, that there are a certain number of cases presenting no pathological changes, due seemingly to perversity, that may forever belong to this sphere, but that there are still a large number that will be withdrawn from this field of uncertainty no one doubts.

On July 1, a lady was referred to me by Dr. H. D. Fry, who in a note stated that the lady supposed a fish bone to be lodged in her throat and she claimed the same having remained there since—a period of six weeks. She made the same statement to me and added that shortly after she made attempts to remove the object with her finger, but was unsuccessful. The bone continued to give her considerable annoyance, especially during the intervals between meals, causing her to make frequent efforts at "empty swallowings." While she could always feel the presence of the body yet its position was never such as to cause any interference with the act of deglutition, nor to any apparent obstructive sensations. She states that the swallowing of bread-crust would diminish, momentarily, the intensity of her sensations, which was no doubt due to the roughness of the bread "scratching" the mucous membrane. The supposed location, she states, was somewhat lower at first than at present. The location of the sensation frequently changed, at one time being on the right, again on the left side and then in the middle of the throat.

Such a history as the above, with regard to the change of location in the position of the bone, seemed quite unusual for that of a foreign body—such bodies, especially if pointed, usually remain fixed in the position they originally take. The pharynx and larynx I examined with the utmost care, although little expecting, on account of symptoms given, to find any trace of the supposed origin of the trouble. My examination not being attended with success, and as the patient was unusually tolerant, I determined to make a digital examination of her throat. This was also unsuccessful. I subjected her to three subsequent examinations, all of which were attended with the same result. The only deviation from the normal noticed in the throat, which arrested my attention during the first examination, was a peculiar vascular condition of the right base of the tongue. This condition I did not at first attach as much importance to as upon subsequent examinations and more mature consideration. A similar condition, attended with exactly an analogous train of symptoms, not arising from an analogous cause, we have since noted in another patient. The pathological change which I refer to is the existence of a small area of ecchymosis or submucous hemorrhage grouped together like a bunch of grapes. This area of hemorrhage effusion, or "spots" as I shall designate them, had the appearance as

though small red shot had been deposited beneath the mucous membrane. The area of effusion varied from one to one and a half centimeters in length and from one-half to three-fourths in breadth; while the individual spots varied from one-half to one millimeter in diameter. These spots while not being hard yet cause sufficient elevation of the mucous membrane to make them distinctly discernible to the sense of touch. As I have stated above, I noticed this condition during my first examination but almost immediately dismissed it from mind as I thought it probably due to the irritation caused by the presence of the foreign body. During my second examination these spots aroused my suspicion and I determined to touch them lightly with the probe. On touching the spots and requesting the patient to state whether I was near the point at which she located the sensation, she intimated that I had touched the exact point. She then informed me that she was now certain that I would be able to remove the object inasmuch as I had been so successful in going directly to the point where it was located. After three days she reported again, her face radiant, and greeting me with unusual cordiality, she stated that she had certainly felt the bone with unusual distinctness within the last hour. It had changed its position from right to left. On introducing my mirror I was somewhat surprised to find the same pathological condition manifested on the left side that I had previously noted, three days before, on the right. A few days later I noted a similar condition near the centre of the base of the tongue, and with this new focus an alteration of the supposed site of the bone to this new point. On each subsequent examination we noticed that the previously existing spots had diminished somewhat in area as well as distinctness. The effused blood gradually became absorbed.

On July 22 a lady whose daughter had previously been under my treatment, presented herself for the purpose of having her throat examined. Her train of symptoms were as follows: She had for several months, at varying intervals, a sensation in her throat as though something was lodged there which she must remove. This something felt scratchy, as she expressed it, very much as though there was a small area of roughness in her throat. She had had these same peculiar sensations some eight months before, but they had subsided after several weeks' duration. On different occasions she located the sensation in different positions—at one time to the right, again to the left, a little higher and then lower. She never suffered pain nor was there any obstruction of the throat or difficult deglutition. She had previously been under treatment. A spray had been placed in her hand which she was diligently using upon a normal nasal and pharyngeal mucous surface. On making a larynxal examination I was very much

surprised by the great resemblance which this case bore to the preceding one; the whole mucous surface of the larynx, pharynx and naso-pharynx, excepting that portion covering the base of the tongue, had a normal appearance. The base of the tongue presented the same pathological change, the hemorrhagic effusion, which I had noted in the preceding case. Although my experience in the preceding case would have justified my concluding that there was a certain causal relationship existing between the pathological changes present and the symptoms manifested, I was not hasty in drawing a conclusion but rather waited for further developments.

Five days later, after an almost complete subsidence of all symptoms, as well as a diminution in size and prominence of the spots, many of the smaller ones having completely disappeared, she had an increase in the intensity of her symptoms, and on making an examination a new area of hemorrhage was visible, larger and more prominent, situated three-fourths of a centimeter to the right of the former area. I introduced a probe, and in order to avoid any possible error, told the patient to indicate when I had touched the point at which she located her abnormal sensations. When the probe came in contact with the first effusion she stated that there she felt an unpleasant sensation, but not until I passed gently over the surface of the new effusion did she give any evidence of certainty as to location. I now could hardly resist the conclusion that there was, in this case, a direct causal relationship existing between the pathological changes present and the symptoms manifested. In these two cases we have symptoms almost analogous, their origin ascribed to different causes, presenting pathological changes which are identical in their character. The important question is to decide what relationship exists, if any, as regards cause and effect between the only pathological change present and the peculiar train of symptoms manifested. It is important to decide whether the symptoms existing, necessarily nervous, gave rise to the pathological changes, or whether the pathological changes having been produced were the cause of the train of symptoms manifested. Supposing the phenomena to be of a nervous character, is it possible that the patient by repeated and frequent efforts at clearing of the throat, rasping and coughing—in the effort to remove the supposed foreign body—is capable of producing a hemorrhagic effusion in this position. Admitting the hemorrhage to be produced in the manner mentioned above—no pathological change being present—is it possible for the seat of the supposed foreign body to change from that at which it was formerly located to the seat of the effusion. The hemorrhagic effusion gradually undergoing absorption, with a subsidence of the symptoms, a re-occur-

rence of the effusion in a somewhat removed position being attended by a re-occurrence of symptoms in their original intensity—supposing no pathological change primarily to have been present—is it possible with the full disappearance of the effusion that the symptoms will also completely subside. In other words, is it possible for a purely nervous phenomenon to attach itself to a demonstrable pathological lesion, subside with the disappearance of the lesion, recur with its re-occurrence, and to disappear entirely with the disappearance of the lesion.

The first and most important interrogation to answer, is the one in regard to the possibility of the patient, mechanically, producing the pathological lesion mentioned. During the effort of clearing the throat as well as retching the tongue is entirely a passive organ, not sufficient muscular force being used to rupture a weakened arteriole even in a state of congestion; nor do I consider sufficient congestion of the vessels of this organ to be produced, during these efforts, to produce a rupture of the capillaries at its base. We have never before noticed an analogous condition in any throat, and if seen by others they have never attached sufficient importance to it to give it a description. It is quite possible that the condition may be the same as that known as milary aneurisms of the tongue. Butlin states: "Ecchymosis may occur in or beneath the mucous membrane from other causes than purpura;" he goes not farther, and does not mention the nature of other causes. In the cases here mentioned the patients were known not to have made any violent efforts, of the kind mentioned, and after coming under my care no efforts of this character were made, yet the effusion re-occurred several times in both cases. The burden of proof rests on the other side.

Admitting the possibility of the second supposition, which could be manifested possibly in certain phases of hysteria and melancholia—a laryngitis often causing the syphilophobiac to suppose that the chancre has re-appeared in his throat—we must admit that our patients were hysterical or melancholic. Our patients were robust women of a decidedly phlegmatic temperament, displaying no nervous phenomena of any character. They were of 50 and 45 years of age.

Even admitting the patients to be of a hysterical temperament, and the original phenomena to be hysterical, followed by the hemorrhagic effusion—mechanical in its origin—is it possible that the symptoms should disappear with the complete disappearance of the only pathological lesion manifested. I could hardly conceive of such a condition; therefore am rather forced to the conclusion that the hemorrhagic effusion was the original pathological lesion which gave rise to the subsequent symptoms.

In one case, that of the fish bone, the probable

irritant was a bone which may or may not have found lodgment in the throat. The foreign body, if it ever entered the throat, must have been immediately expelled by the effort of coughing, excited by its presence. I am rather inclined to believe that no such object ever found lodgment in the patient's throat; the effusion occurred about the same time, and she supposed the symptoms produced thereby to be the result of the fish bone. We know how unreliable the statements of patients are in regard to such matters. Patients very frequently persist in asserting that a foreign body is still lodged in the throat, weeks after the occurrence, when its lodgment was only momentary. In all cases where foreign bodies lie imbedded in the substance of the tongue it gives unmistakable evidences of its presence. *The wound does not heal* and it lies in the midst of an indolent tumor, the wound leading down to its surface. I think we must conclude that the fish bone never was present in this case; the eating of fish and the effusion occurring simultaneously, the patient immediately ascribes the phenomena produced by the effusion, to the lodgment of a bone. We can readily conceive how such would be the case, as a hemorrhage would be almost as sudden in its production—the train of symptoms as suddenly produced—as those produced by the swallowing of a bone.

In our second case we have a much simpler condition of affairs, and one in which there is not the same doubt as to the origin of symptoms. Here our patient came to me with a feeling of fulness in her throat, and the sensation of a foreign body lodged there—resembling very much the sensation imparted by a crumb of dry toast. These symptoms being greater at one time than another, and varying in their location. It seems to me that my position, at least in these two cases, is proven beyond doubt. We have here a pathological lesion, producing a train of symptoms which ameliorate and disappear with a diminution of and disappearance of the change; the symptoms to re-occur in their full intensity in another locality, with the reappearance of pathological changes in another position, the symptoms to completely subside with the disappearance of the lesion. The symptoms are somewhat analogous to those produced by enlargement of the glands at the base of the tongue, and to those arising from a varicose condition of the vessel in the same locality.

I can offer no suggestion as to the etiology or pathology of this condition.

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## SUPPLEMENTARY REPORT OF THE USE OF SALOL IN TYPHOID FEVER.<sup>1</sup>

BY R. H. DAY, M.D.,  
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In the last days of September, 1888, I was called to see a patient suffering from typhoid fever, and I was led by some recent studies of the composition and therapeutic effects of salol to give it a trial in the case before me. I did so, and with such prompt and decided success, that I deemed it my professional duty to report my experience at once to the medical profession. To this end I wrote up a report of the case for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and in the latter part of October forwarded it to the Editor, requesting its early publication. The Editor kindly accepted the article, and wrote me it would be printed as soon as it could be done in justice to other contributors.

Unfortunately, perhaps, the publication of my article was long postponed, owing to the many excellent papers on THE JOURNAL's file ahead of mine; yet this delay enables me to contribute this supplementary report of a case similar in character to the first, and occurring in the same individual.

Willie Thomas, col., æt. 17, whom I discharged cured on the 3d of October, 1888, after going about for about four weeks in apparent good health, except being weak, was again stricken down on the 30th of November.

On the 3d of December I was again requested to see him. I found him lying on his back, his skin hot and dry, tongue coated dark brown, fissured and without the slightest moisture; front teeth, gums and lips coated with sordes; intellect dull and mind wandering, with muttering incoherency when dozing and frequently when awake; thin, dark, offensive stools four or five times in the twenty-four hours; urine scanty with considerable sediment, upon standing, of a pinkish and brick-dust color; abdomen more retracted than otherwise, with a sense of soreness upon gentle pressure over the whole abdominal region; no relish for food since his second attack. His pulse was very small, weak and up to 130 per minute, temperature 103.4°.

It was now just two calendar months since I discharged him cured of typhoid fever, and I recognized now the same disease and, having had such good results from salol in his previous sickness, I determined at once to give it another trial. Accordingly I prescribed 5 grs. of salol every three hours, and no other medicine to be given, that I might test salol upon its own therapeutic merits. I also directed the liberal use of port wine, Duro's elixir, and cow's milk with beef broth.

Two days subsequently I visited my patient and took with me my friend, Dr. J. W. Dupree,

<sup>1</sup> See p. 80 for original report.

THE next meeting of the Association will be held at Newport, Rhode Island, June, 25, 1889.

to whom I had narrated his previous sickness and the success I had experienced in treating him with salol. Upon seeing the patient Dr. Dupree unhesitatingly pronounced the case typhoid fever and thought him dangerously ill, though I thought I could perceive some amelioration since my previous visit.

I continued the salol and kept up the nourishment, telling the mother if he ceased to improve or she should observe any symptoms of his growing worse, to let me know immediately. Suffice it to say that I saw my patient every few days for the next ten days, and each time with marked improvement, after which I discontinued my visits, leaving him convalescent and needing only good food to establish his returning good health.

This is the second case of typical typhoid fever in which I have given salol with eminent success; in this last case, not so prompt as in the first, which perhaps is easily explained by reason of the general impairment of his physical system by his previous sickness; but even in this last case I could discern in forty-eight hours the commencement of a salutary work. And in this last case salol alone was used, and to it, and to no other drug, belongs whatever good results were accomplished.

Now, in what manner salol acts upon the human organization to exercise such a curative power in typhoid fever, it is too recent before medical observers and workers, and its trials too few, to lay down any reliable theory.

But with my limited experience of its use, I would by no means restrict its application to the treatment of typhoid fever, for since I have commenced its use, I have repeatedly given it in the diarrhoeas and dysenteries of infants and children with the best results, and in the first week of January of this year, in an adult white male, Mr. E. T., attacked with *ileitis*, having frequent and copious bloody watery stools, fever and great pain, prostration and soreness over the bowels, I used salol 5 gr. with pulv. ext. opii  $\frac{1}{2}$  gr. every two to four hours, with prompt relief, and an established convalescence in forty-eight hours.

Judging, then, from my short but sharp experience, it appears to be suitable and useful in inflammations of the mucous coat, glands and follicles of the intestinal tract, upon which it appears to exert a prompt and peculiar beneficial influence.

Further observation and trial, and rigid scientific research must be instituted, before the merits of this new claimant to the confidence of the medical profession can be fully established and its true therapeutic value and range of application can be definitely settled, and be made of practical value to the medical profession.

Since the foregoing thoughts were written, I have read in the January number (1889) of *Gaillard's Medical Journal*, a most valuable paper by Dr. W. A. Cauldwell, of Chicago, on the "Ra-

tional Selection of the Salts of Salicylic Acid for Therapeutics," taken from the *American Medical Digest*. I find in this paper many valuable suggestions relating to the rational use of salol in medicine, and that very favorable reports are made of its administration in diarrhoea by Dr. O. I. Osborne; and that Dr. James Barnsfather reports good results of its use in typhoid fever.

## RETRO-PHARYNGEAL ABSCESS AND "HEN-CLUCK" STERTOR.

BY KENT K. WHELOCK, M.D.,

OF FT. WAYNE, IND.

My apology for offering this oft-repeated tale to your readers is found in the fact that the basis of all true knowledge lies in observation and experience, and the further fact that the general practitioner, overworked, worried with waiting and watching the eventuation of a certain case, allows his mind to drift into a groove from which it is sometimes suddenly jerked by the rough jolt of death. And the further fact that the thinking mind, delicate as a galvanometer, takes cognizance of all externals calculated to make an impression upon it.

On March 16 I was asked by the father of the child, the history of whose case I am about to relate, to meet my friend Dr. F. Greenwell, of Hometown. I found a male child 11 months old, pale but well nourished, with a slight swelling on right side of upper part of neck in front of the sternocleido-mastoid muscle. A similar swelling had developed at the same region on the left side, which had eventuated in an ordinary abscess, and was opened by the doctor. Before the termination of the abscess on the left side the swelling on the right side made its appearance, and it was opened and discharged pus. After the last abscess was opened the child seemed to do fairly well till about two weeks previous to my visit, when croupy symptoms developed, coming on in the night, for which the doctor sent some temporary therapeutic agent which would serve till such time as he could see the child in person. The croupy symptoms grew worse and led to the belief that an abscess was forming in the nares so as to obstruct nasal respiration. When I saw the patient he was quite lively and able to nurse, yet continued effort at the nipple caused dyspnoea, to relieve which the child would let go the nipple and throw its head back. No pain attended swallowing, as he took large quantities of milk and water eagerly, the only remarkable feature attending such efforts being the rapidity with which he swallowed the fluid, showing that he was compelled to suspend respiration through the nose while the mouth was closed. After taking the fluids the child seemed exhausted and dropped off to sleep, at first breathing regularly enough with



stertor now and then. Soon the respiration grew more feeble and finally apparently ceased. He laid in this condition a few seconds and then suddenly awakened with an effort to catch his breath. At other times, generally between the stertor above spoken of and the apparent suspension of respiration, a peculiar clucking noise is heard, such as is made by the hen calling her brood together. It was this peculiar cry which led me to suggest that the trouble was, as I then said, "tracheal." I examined the nasal cavities carefully and found no evidence of obstruction beyond the swelling attending an ordinary cold, and passed a small bougie through the nostril to satisfy myself that there was no great swelling obstructing the nasal respiratory lumen. In examining the fauces by reflected light the mucous membrane of the pharynx had a normal pink tint. But the struggles of the child were such as to render the examination unsatisfactory without complete etherization. He was then completely subdued, and the result of the examination showed a plain right lateral bulging. Exploration with the finger rather confirmed the impression. Yet it would have been impossible to hinge a diagnosis upon tactile impressions alone. I made an incision  $\frac{1}{2}$  inch to right of the mesial line and a little above the margin of the soft palate, into the most dependent part of the swelling. The child was carried rapidly forward on its face, when fully one-half teacupful of pus and blood passed out upon the floor. That night the child slept without any difficulty and was decidedly relieved. On the next day I again saw the little patient with the attending physician, when all the symptoms causing the previous alarm had disappeared. The child vomited after etherization, throwing up some more pus and blood. The swelling on the right side of the neck had disappeared and the skin was thrown into delicate folds such as are seen when there has been a circumscribed swelling with subsequent relief of pressure. The child is scrofulous, and at this time the father had suffered from a series of abscesses, amongst which was one of the middle ear. Fleming seems to have been the first to give a detailed report of retro-pharyngeal abscess, in the *Dublin Medical Journal* for February, 1850, and Henoch says that he owes the diagnosis of his first case to having read this report only a few days before. The symptoms, as set forth in Henoch's "Lectures on Diseases of Children," do not differ except as to detail from what was observed in my patient. The essential feature "is a snoring sound, especially during sleep." I have not seen this peculiar cry referred to by any author as resembling the cluck of a hen, but it struck me as being so eminently similar that I believe retro-pharyngeal abscess with pressure about the glottis may be predicated upon the "hen-cluck stertor" being heard. The post-mortem in West's first case is here appended:

"On dividing the cervical fascia on the right side a thick yellow, healthy pus poured out. This matter had burrowed close to the œsophagus, to within a little more than an inch of the clavicle, and also in an oblique direction behind the œsophagus toward the left side, completely detaching it from its communication on the right side, though not on the left. It passed up behind the œsophagus and pharynx quite to the base of the skull, a few shreds of cellular tissue bathed in pus being all that remained of their attachments. The tonsils were not enlarged and the glottis was neither red nor swollen."

## MEDICAL PROGRESS.

**YELLOW FEVER GERM.**—A dispatch from Columbus, O., in the *Baltimore Sun*, says: "Professor H. J. Detmers, of the Ohio State University, has concluded the task of photographing the yellow fever germs that had been sent him by Dr. James E. Reeves, of Chattanooga, Tenn. The professor says this is the first time that yellow fever germs have been found in the tissue, scientists heretofore searching for them in vain. They have been found in zoogloea masses in the capillary blood-vessels, which appear distended and ruptured, and at these ruptures these zoogloea masses are dense and large. The bacilli present themselves in four forms; the first in a plain, dark, round mass; the second an oval, with a dark point at each extremity; the third, an oblong disc with dark points, as in the second, and fourth two darks united by a film, and strikingly resembling a dumb-bell. Being asked as to how the discovery regarding the cause of the yellow fever came to be made, he said: 'Dr. Sternberg, of Johns Hopkins University, for a number of years has made exhaustive searches for the yellow fever germs, but without success, in the tissues. During the last epidemic he made several post-mortem examinations at Decatur, Ala. Liver and kidney tissue of two persons at least were sent by him to Dr. Reeves for the purpose of mounting for microscopical purposes. I have several negatives, each of which is good. Some show the bacteria singly, others in masses with the capillaries distended with them.'

"Dr. George M. Sternberg is a surgeon in the United States army, and is doing his laboratory work in Baltimore at the Johns Hopkins University. He has been engaged during the past two years in investigating yellow fever under orders from the President of the United States, and in compliance with an Act of Congress making an appropriation for this purpose. Last year he visited Brazil and Mexico in the prosecution of his investigations. He also went to Havana, and in the autumn to Decatur, Ala., for the same purpose.



"He says that the announcement that Dr. Reeves has discovered the specific germ of yellow fever is entirely premature. Dr. Reeves has found bacilli in the tissues of one or more cases of yellow fever which occurred during the recent epidemic in Decatur, but bacilli had previously been seen in yellow fever tissues by Dr. Sternberg and others. Last spring in Havana Dr. Sternberg obtained by cultivation from the liver in two cases and from the kidneys in four cases bacilli resembling those which have been found by Dr. Reeves and probably identical with them. A detailed report with reference to the various microorganisms which he has encountered in the tissues and in the alimentary canal of yellow fever patients will in due time be submitted by him to the President of the United States. In the meantime he calls attention to the fact that the finding of bacilli in the tissues of one or more cases of an infectious disease is a long way from making the scientific demonstration that these are the specific cause of the disease."

**THE KNEE-JERK IN DIPHTHERIA.**—In a note on the knee-jerk in diphtheria Dr. W. B. HADDEN, in the *Lancet*, says that so long as this remains absent the patient cannot be considered free from the risks of paralysis and of cardiac failure.

**BEER COMPARED WITH OTHER ALCOHOLICS.**—For some years a decided inclination has been apparent all over the country to give up the use of whisky and other strong alcohols, using as a substitute beer and other compounds. This is evidently founded on the idea that beer is not harmful, and contains a large amount of nutriment; also that bitters may have some medical quality which will neutralize the alcohol which it conceals, etc. These theories are without confirmation in the observation of physicians. The use of beer is found to produce a species of degeneration of all the organs. Profound and deceptive fatty deposits, diminished circulation, conditions of congestion, and perversion of functional activities, local inflammations of both liver and kidneys are constantly present. Intellectually a stupor amounting almost to paralysis arrests the reason, changing all the higher faculties into a mere animalism, sensual, selfish, sluggish, varied only with paroxysms of anger that are senseless and brutal. In appearance, the beer-drinker may be the picture of health; but in reality he is most incapable of resisting disease. A slight injury, a severe cold, or a shock to the body or mind, will commonly provoke acute disease, ending fatally. Compared with inebriates who use different kinds of alcohol, he is more incurable, and more generally diseased. The constant use of beer every day gives the system no recuperation, but steadily lowers the vital forces.

It is our observation that beer-drinking in this country produces the very lowest kind of inebriety, closely allied to criminal insanity. The most dangerous class of ruffians in our large cities are beer-drinkers.

Recourse to beer as a substitute for other forms of alcohol merely increase the danger and fatality. —*Scientific American*.

**LEUCOPLASIA AND CANCROID OF THE VULVO-VAGINAL MUCOUS MEMBRANE.**—BESC.—*El Progreso Ginecologico y Pediatra*, July 25, 1888. The following are the author's conclusions:

1. Leucoplasia, which has been described heretofore, as it appears in the buccal mucous membrane, appears also in the vulvo-vaginal mucous membrane.

2. It is an affection which is characterized by white patches, and its lesions consist in a thickening of the epithelial coat and the corium.

3. Like buccal leucoplasia, the form which involves the vulvo-vaginal mucous membrane may be the first step in the evolution of papilloma and cancrioid.

4. Leucoplasia and cancrioid are distinct affections: the first plays the part of an irritant and prepares the soil for the evolution of a second.

5. In regard to treatment:

- a. The leucoplasia patches must be treated in the beginning with hygienic and medicinal means.

- b. If the patches are rebellious to treatment, and are circumscribed, they should be extirpated.

- c. If papillomata have developed, they should be removed as thoroughly as possible, the section extending well beyond the limits of the diseased tissue.—*Annals of Gynecology*.

**THE TOXICOLOGY OF COCAINE.**—M. MUSSI, in *Annales de la Société Médico-Chirurgicale de Liège* has applied his investigation to the problem of how much of the alkaloid could be recovered in cases of poisoning by cocaine.

He experimented on rabbits which had been subjected to the subcutaneous injection of fatal doses of cocaine. To isolate the alkaloid he employed the proceeding of Stas-Otto, slightly modified.

He was not able, 48 hours after death, to find cocaine in the vitreous humor, the brain, the liver or the kidneys. The heart, the blood and the lungs furnished traces. Four days after death, the alkaloid had completely disappeared from all the organs.

The author concluded by expressing the opinion that in fatal cases of cocaine poisoning it will not be necessary for the most expert chemist to attempt a quantitative research, for in the majority of cases it will furnish no indication of the dose absorbed.

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SATURDAY, JANUARY 26, 1889.

REPORT OF THE SURGEON-GENERAL  
OF THE ARMY.

SURGEON-GENERAL MOORE has just made public his annual report. In all financial matters the report covers the operations of the fiscal year ended June 30, 1888, from the appropriation made by the Act approved February 9, 1887, for the expenses of the Medical Department of the Army. The money value of the medical and hospital supplies issued during the fiscal year was \$178,034.11, and the Surgeon-General estimates that the cost will exceed that amount for the current year. In regard to the employment of "contract surgeons" and the Hot Springs Hospital, the Surgeon-General says:

"The limited number of contract surgeons allowed by law necessitates the employment of private physicians, under existing regulations, to furnish medical attendance to officers and enlisted men at stations where there is no medical officer of the Army. These physicians are paid by the visit from the 'medical and hospital appropriation.' Added to this is the necessary expenditure for the employment of skilled nurses for the proper care and treatment of cases of epidemic and contagious diseases.

"The merging of the appropriation for the maintenance of the Army and Navy Hospital, Hot Springs, Ark., into the appropriation for the Medical and Hospital Department by the Act, approved September 22, 1888, adds to the amount to be expended for the pay of employes, the pay-roll of said hospital, which has been at the rate of \$12,000 per year. The amount fixed by said Act for pay of employes is \$42,000, which in my judgment will not be sufficient to meet the necessities of the service for payment of employes at the medical purveying depots, medical directors' offices, and the U. S. Army Dispensary, Washington, D. C., heretofore allowed by law at \$36,000, and paid from the appropriation for the Medical and Hospital Department—and, in addition thereto, the employes of the Hot Springs Hospital. The limit should therefore in my opinion be not less than \$48,000.

"The order of the President, prescribing the regulations for the administration and government of the Army

and Navy Hospital, Hot Springs, Ark., provides that the employes of said hospital shall be *civilians*."

The bulk of the report is on the "Health of the Army," which covers a different period of time from that given in the financial statement, as it is made for the calendar year which ended December 31, 1887. The report states that

"To facilitate the study of the influences exerted upon the health of troops by peculiarities of environment, the territory of the United States, over the whole of which the Army is dispersed in numerous small commands, has been divided into regions, each of which is characterized by distinct physical features and climatic conditions, and the various items of information embodied in this report have been arranged as far as possible in accordance with that division. Following the statistics relative to the health of the troops serving in the different regions, the subject of the health of the whole Army receives consideration, and the principal facts in connection therewith are given.

"The regions into which the country has been divided for the purposes of this report are eleven in number, as follows: The Atlantic Coast, Eastern Timbered Plains and Hills, Appalachian, Northern Lakes, Central Timbered Plains and Hills, Alluvial, Gulf Coast, Prairies, Great Plains, Cordilleras, and Pacific Coast. Some of these regions, on account of their great extent north and south, have been subdivided into groups of military posts."

For those of mathematical turn of mind the succeeding fifty pages may be of thrilling interest, but it is of real importance to those concerned in maintaining the health of the Army. The remaining pages are of general interest to the profession.

"The number of cases treated in hospital during the year was 14,403, in quarters 14,800, and in the field 524, giving admission rates of 621, 604 and 22, per 1,000 of mean strength of the whole Army, respectively. For 1886 these rates were 546, 688 and 29.

"Counting admissions to sick report of every description, the average loss of time on account of sickness during the year was 15.5 days for each man in the Army, showing a change for the worse as compared with the previous year, the average for 1887 being 1.1 days higher than that for 1886, and only .6 of a day lower than that for the previous decade. The average for the colored troops was 16.8 days, and for the white 15.3.

"The ratios of constant non-effectiveness, per 1000 of mean strength, of the various armies are as follows, arranged in the order of their relative positions: Great Britain (1885), 57.9; United States (1887), 42.38; United States (1876-1885), 44.0; Austria (1886), 41.0; France (1884), 39.3; Prussia and Württemberg (1881-1882), 38.9; Italy (1885), 33.4; Belgium (1886), 28.8.

"The ratio of non-effectiveness due to diseases was 33.70, per 1000 of mean strength (white 33.47, colored 35.84); that due to injuries was 8.68 (white 8.52, colored 10.23).

"The constant non-effective rate of patients treated in hospital was 28.37, in quarters 13.62, and in the field .39, per 1000 of mean strength of the whole Army, against 25.93, 12.69, and .79 for the previous year. The fact that the admission rate of patients treated in quarters was higher than that of patients treated in hospital, while the non-effective rate of the former was less than one-half that of the latter, goes to show not only that the disabilities treated in quarters were relatively much less important factors in the impairment of the efficiency of the Army, than those treated in hospital, but that, as previously stated, the total admission rate can not be safely used for purposes of comparison, or be considered a reliable index of the health of the Army."

Concerning the Hygiene of the Army, the Surgeon-General says:

"The sanitary reports received from medical officers during the year ending December 31, 1887, bear evidence that the important duty of supervising the hygiene of the commands to which these officers were attached was performed by them, as a rule, with a full appreciation of the great responsibility devolving upon them, and with a commendable degree of intelligence and discretion.

"In the majority of instances the post surgeons received the cordial support and coöperation of their immediate commanders in the sanitary measures recommended, and, so far as the means at hand would permit, those measures were generally carried out.

"But, notwithstanding the vigilance of medical officers and the active efforts of commanding officers, the fact remains that the sanitary conditions which prevail throughout the Army are in many respects susceptible of great improvement. Some of these conditions are, beyond a doubt, already operative in the impairment of the health and efficiency of the Army, while others may become so to a most disastrous extent under contingencies which are by no means improbable or remote. The offensive and dangerous privy vault and cesspool are still in common use; lack of proper bathing facilities continues to be a constant cause of complaint; overcrowding of quarters and insufficient ventilation are frequently reported; the water-supply of certain stations is inadequate, and at others there is reason to fear its pollution; the drainage of many posts is defective; the uniform clothing is found to be altogether unsuited to the requirements of the men in hot climates;<sup>1</sup> and the issue of salt pork as a part of the ration is generally condemned at Southern stations, as is the deficiency in the food supply at some of them, which compels enlisted men to contribute to the purchase of fresh vegetables out of their own limited means, while at the same time the proceeds of the sale of a portion of the ration are devoted to the maintenance of a regimental band, and to other purposes entirely foreign to that of feeding the soldier.

"To remedy these evils drastic measures are required; antiquated methods must be abandoned; traditions of the service must be disregarded, and individual opinions and preferences must be overruled, where any of these conflict with the teachings of modern sanitary science. But little can be accomplished in this direction without vigorous and decisive action on the part of the higher military authorities. Such action is urgently demanded, and, in order that it may be followed by the best results, it should be taken in accordance with a plan so carefully considered and comprehensive that not only will the removal of existing evils be provided for, but their avoidance in the future will be insured."

The work of the Record and Pension Division, as stated on page 137 of the report, is a gratifying evidence of the ability and efficiency of the officers in charge of that Division, and exhibits a marked improvement on former reports. The application of the card index system to hospital registers, first recommended, we believe, by Dr. Ainsworth, is one of those labor-saving appliances that makes one wonder why it had not been thought of before. The museum now has a total number of

specimens of 26,695, of which 833 were received during the past year. There were presented to the library 269 books and 5,212 pamphlets during the year, and this great medical library now has a collection of 130,614 medical books, bound medical journals, theses and pamphlets.

In regard to medical officers, the Surgeon-General states there are no vacancies at present. The deaths for the year include those of Surgeon Spencer, and Assistant Surgeons Dickson, Cunningham, King and Azpell. There are 8 medical officers awaiting retirement, and 15 on sick leave, and the service is seriously embarrassed in consequence. General Moore recommends an increase in the corps of twenty Assistant Surgeons. It is a little remarkable that the medical officers of the Army are discriminated against in the matter of retirement. Whenever a vacancy occurs on the retired list of the Army, that vacancy is said to be invariably filled by the retirement of a line officer. This is, however, not stated in the report, but is a matter of comment in medical circles at the Capital. Taking the medical corps of the Army as a whole, they have much less ground of complaint than any of the other branches of the public medical service, and it is pleasant to see on record such gratifying evidence of the efficiency and general ability of the corps.

#### ON DISTINCTIVE DRESS FOR PHYSICIANS.

"De noche todos los gatos son pardos."—*Nuñez.*

An interesting young college-graduate, whom we may call CELSUS, junior, recently made a proposition, taken up seriously in some quarters, that all physicians should wear some distinctive dress or badge, whereby a gentleman would be known to be a physician at all times, and in all circumstances.

The ostensible object of such distinctive dress, was so that in case of accident, poor suffering humanity might more speedily be relieved. It strikes us that this proposed return to mediæval cruelty would cause as much suffering as it would remove. Think of the sufferings of the young physician going to opera with his innamorata, if forcibly seized at the doorway of the theatre by a policeman and *volens volens* dragged away to set a broken leg, or attend an immigrant child suddenly seized

<sup>1</sup> Since the close of the calendar year 1887, for which this report is made, the Quartermaster's Department has prepared and issued to the troops in the Department of Texas, and in a portion of the Department of the Missouri, clothing especially intended for wear in hot climates, which, it is hoped, will remove the cause of complaint against the uniform referred to above and in subsequent pages of this report.

with a fit. But as an advertisement it would a long way excel the happy device of Bob Sawyer, late Knockemoff, who always managed to be sent for just before the sermon commenced, but sufficiently long after the opening exercises, to insure the full notice of the congregation. It is within the memory of many, when no general practitioner in England or on the Continent went without his tall hat, his ruffled shirt, broad shoe buckles and gold-headed cane, and it was only in the last century when one must wear the silk full hosiery, the smalls, the lace sleeves, the variegated waist-coat, the peruke, and the flowing ribbons, such as Mr. Joseph Jefferson permits us to see when in "The Rivals" he personates Bob Acres. But, our young friend will say, "there is no need to act silly, nor because a man is faultlessly dressed, need he be a fop."

This might lead us to inquire what is faultless attire? Surely not the ribbons, spangles, and curled wig of the Bob Acre's family, for as Humphrey Clinker said these were "ridiculous modes, invented by ignorance, and adopted by folly"—what Swift once called a "volcano of silk, with lava buttons."

The fact seems to have been, that the old picturesque costumes were abandoned, as Farquhar said, because "here's such a plague every morning, with buckling shoes, gartering, combing and powdering," that the burden of dressing became insupportable, and fashions were adopted, which, if neither beautiful nor æsthetic, are at least comfortable, and easy of adaptation.

We very much fear that whether CELSUS, junior shall advocate a return to the old costumes, or the creation of new, he will be doomed to disappointment. Even the wearing of a distinctive button will scarcely be agreed to, as when liberty has once been granted it is not easy to put on the yoke, and one derisive joker has already rather unfeelingly suggested that the design for the button should have a pill tile for the escutcheon, bear a hypodermic needle rampant, and an unpaid bill *gules* as a bar sinister.

THE ACTIVE PERIOD OF INFECTION IN SCARLET FEVER.—The period of activity of infection in scarlet fever is discussed by Dr. Arthur Whitelegge in the *Lancet*, and he alleges that there is a sudden decrease in the infectivity about the sixth day, which is restored about the twelfth.

## EDITORIAL NOTES.

PHILADELPHIA'S DEATH-RATE.—The vital statistics of Philadelphia for 1888 furnishes a text for the *Medical Register*, which calls attention to the fact that the health of the city has improved, even in the face of a bad sanitary condition. This is accounted for in the exodus of the middle and lower classes to the suburbs which has taken place in the past few years. The death-rate from consumption shows a marked decrease since 1884.

THE PENALTIES OF EVOLUTION.—In answering negatively the proposition, "Are quadrupeds subject to the hæmorrhoidal disease" Dr. William Bodenhamer remarks, in the *New York Medical Journal*: "If it is true that the erect position of man is the only predisposing cause why he is subject to hæmorrhoids, and why quadrupeds, in consequence of their prone position, are not, it affords a strong argument in favor of the Darwinian theory that we were originally quadrupeds—that the posture of our bodies was prone, not upright as now. In view of this predisposing cause, it would appear, then, that hæmorrhoids are alone the heritage of man in his present *exalted* posture." The Doctor might have added that quadrupeds are not subject to inguinal hernia.

SHALL INEBRIATES HANG?—The position taken by a writer in an Eastern journal that "the death penalty as a means of punishment for inebriates (convicted of a capital crime) is opposed by all the teachings of science and experience," is controverted by Dr. Washington Ayer in the *Pacific Medical Journal* for January. Dr. Ayer says "a man is responsible for every voluntary act, inebriety is a voluntary act, therefore a man is responsible for being drunk, and if he become unduly excited by reason of being drunk, he cannot be relieved of the responsibility of any criminal act, save it be in self-defense or in defense of his honor."

BOOK REVIEWS.—Our readers are informed that the Editor of THE JOURNAL is responsible for all book reviews and notices that are unsigned. All such reviews and notices written by others will bear the initial of the author.

THE FRENCH MILITARY MEDICAL SCHOOL.—The French Chamber of Deputies has voted over thirty thousand francs for the school for military sanitation, which is re-organized on a basis which

includes a contract for six years' army service upon those who have the advantage of a course in the school of military application of medicine and pharmacy.

**CHANGES IN PERMANENT OFFICERS.**—Dr. Laine has been selected to succeed Dr. Tyrrell as "permanent secretary" of the California State Board of Health. The absence of permanency is troubling the friends of Dr. Tyrrell. The discussion of the ethics involved fills several columns of the *Pacific Medical Journal*.

**PROGRESS IN ROME.**—According to *Riforma Medica*, a recent decree, authorizes the creation of a Government vaccinal institute at Rome. It will be under the charge of the Direction of Public Health and supervision of a commission composed of the Director of Public Health, a General Army Surgeon, and of the President of the Faculty of Medicine of Rome.

*The Memphis Medical Monthly* is out in a new cover. The design of the title is neat and appropriate.

**DR. HODGHEAD AS AN EDITOR.**—D. A. Hodghead, A.M., M.D., has succeeded to the editorial and business control of the *Pacific Medical Journal*, and greets his new constituency with a vigorous exposition of the aggressive policy he intends to pursue in the conduct of the paper.

**NEW COLLEGE BUILDING.**—The new building of the Medico-Chirurgical College and Philadelphia Dental College is to be opened this afternoon.

The officers of the Medical Society of the District of Columbia for 1889-90 are: President, Dr. C. E. Hagner; Vice-Presidents, Dr. McArdle and Fry; Treasurer, Dr. Franzoni; Corresponding Secretary, Dr. T. C. Smith; Recording Secretary, Dr. S. S. Adams; Librarian, Dr. Mundell; Examiners, Dr. S. S. Adams, G. Wythe Cook, Kleinschmidt, H. L. Johnson and Acker; Censors, Drs. Winter, Frederick and Ober.

#### OBITUARY.

**DEATH OF MRS. GARCELON.**—The death of Mrs. Olivia Spear, wife of ex-Governor GARCELON of Maine, is announced. Dr. and Mrs. Garcelon were welcome and familiar figures at the meetings of the American Medical Association, the members of which will be grieved to hear of the demise of this estimable lady.

## SOCIETY PROCEEDINGS.

### Obstetrical Society of Philadelphia.

*Stated Meeting, Thursday, December 6, 1888.*

THE PRESIDENT, T. M. DRYSDALE, M.D.,  
IN THE CHAIR.

DR. WM. GOODELL showed a

RECURRENT INTRALIGAMENTARY CYST,  
removed without entrance into the peritoneal cavity.

The patient, a lady æt. 31, at the age of 18 had an ovarian cyst removed by Dr. Joseph Schmetter, of New York, who, in answer to a letter of inquiry, was kind enough to write the following description of his operation: "The cyst had no pedicle and was attached with a very thick mass of fibrous tissue to the right side of the uterus. This attachment being very vascular, it was necessary to ligature in several portions the parts representing the pedicle, and to sew them into the incision of the abdominal integuments for the purpose of being able to control the secondary hemorrhage, if any should occur, which in fact took place several days after the operation."

On December 1 Dr. Goodell operated on her. The fistula was first enlarged so as to admit the finger. As this gave no satisfactory information, the incision was lengthened in the old cicatrix to about 4 inches. This revealed a solid colloid tumor about as large as a cocoa-nut. It was firmly adherent to the cicatrix, to the abdominal wall in front and to the left side. When the lateral adhesions were severed a very large amount of pus escaped from the wound, and the hand now entered into a capacious cavity wholly shut off from the peritoneal cavity by walls of thick pyogenic membrane, which at the navel looked like a false diaphragm. Into this cavity the colloid tumor hung, as if it were suspended. That is to say, while its upper and right lateral surfaces were firmly and closely adherent to the abdominal wall, its under or lower surface, free from adhesions, projected into the fluid of the abscess cavity. A short and slender pedicle, running from the lower end of the tumor, was lost in the pelvic floor of pyogenic membrane. Where this pedicle ended it was impossible to discover, as not a pelvic organ could be felt through this thick membrane, but it was closely adherent to the lower abdominal wall, from which it was detached before being tied and cut.

The tumor was now cut open and its size lessened by digging out its contents with the finger-nail. When it was removed free hemorrhage occurred from the broken adhesions. This was checked by Monsel's solution and by the free application of vinegar, a pint of the latter being

poured into the cavity and splashed about the bleeding surfaces. This large cavity was then treated by the capillary drainage of Mikulicz, viz.: by packing it with iodoform gauze.

Since the operation the patient has done unexceptionably well, the temperature being always natural and the pulse not more frequent than it would be in a person so reduced as she is.

In reviewing this curious case it seems to me that the original tumor removed was an intra-ligamentary cyst of the right ovary; that, as he suspected, a small piece of the cyst wall was left in that portion of the broad ligament which was made the pedicle, and sewed into the abdominal incision, and that *pari passu* with the growth of this fragment of the cyst, an abscess had formed between it and its capsule of broad ligament which formed the walls of the abscess. The 4-inch incision into the abdominal wall did not open into the peritoneal cavity, but merely into a vast pus sac. The tumor was therefore a recurrent intra-ligamentary cyst, and wholly extra-peritoneal. The wonder to me is that this lady bore for so long a time so large an abscess without losing her life.

DR. GOODELL also showed an ovarian cyst which he had removed a few hours before, and in which the characteristic green hue of necrosis was marked. Torsion of the pedicle occurred one month ago, characterized by severe pain and emesis. After this the woman gradually failed in health and lost flesh from chronic blood-poisoning. A few hours before the operation an attack of pain and vomiting took place. The cyst was universally adherent to the abdominal wall, intestines and omentum. The pedicle, a very slender and short one, was so twisted as to stop all circulation, the cyst being nourished merely by its adhesions.

DR. GOODELL showed a specimen of what he deemed to be an *Extra-Uterine Fœtation*. A healthy lady æt. 33 had been married thirteen years without conceiving. On November 25 she consulted Dr. Goodell about pelvic colics, irregular hemorrhages, painful defecation and occasional pains running down the left leg. He found a small womb, pushed forward and to the right by a boggy tumor, lying to the left in Douglas' pouch. Diagnosis of extra-uterine fœtation was made and early operation insisted upon. November 29, while she was in his private hospital, a fifth attack of pain of a "bursting feeling" aroused her out of a sleep. This was followed by faintness. About six hours after this attack laparotomy was performed. As soon as the cavity of the abdomen was opened a large amount of black blood, of the consistency of thin molasses, welled out. Several knuckles of intestine were also forced out. The right ovary was sound, but the left could not be discovered. In its place was found an irregular cavity, within which was

found a tumor about the size of an egg, containing within its sac layers of coagulated blood. It was attached to the broad ligament, which was tied and cut off. A number of old clots and shreds of fibrin were flushed out of the abdominal cavity. A drainage tube was put in and the wound dressed with iodoform gauze. The tube was removed December 3, and the patient has thus far had an uninterrupted convalescence.

DR. BALDY, who was present at the operation, had cut the specimen open. He said that the mass contained a semi-fluctuant tumor the size of a small egg, and which he felt confident contained the fœtus before it was opened. On being laid open it appeared like a large blood clot, parts of which had undergone degeneration, presenting a mottled appearance. A small portion of normal tube seemed to run directly into this mass and, as it reached it, spread its coats out over the mass. The ovary was nowhere to be found. He believed that the mass was blood clot, but could not explain its occurrence. The fœtus was not found.

On motion of Dr. Baer the specimen was referred to the Committee on Morbid Growths.

DR. JOSEPH PRICE read a paper on

#### TUBAL DISEASE A PRIMARY CAUSE OF INTESTINAL OBSTRUCTION.

In reporting cases he had repeatedly called attention to the frequency of adhesions occurring between the uterine appendages and some part of the intestines, and his present purpose was to emphasize the importance of recognizing the danger of obstruction of the intestine arising from inflammatory conditions of the pelvic viscera. In the cases operated on the past year, in more than 15 per cent. there were noted "dense, firm adhesions" between the intestines and uterus and appendages, malignant cases not included. In every case, with one single exception, the inflammatory conditions causing the adhesions apparently originated in the uterine appendages. First, as to the form or kind of obstruction likely to occur. The inflamed serous surface of the diseased tube or ovary, coming in contact with a loop of intestine, or an edge of omentum, provokes inflammation there, and with characteristic promptitude these surfaces cohere. If the process is not severe and of slight duration, these adhesions may disappear as promptly as they occurred, by the enormous absorptive power of the peritoneum, hastened by the mild influence of the peristalsis of the bowels. If, however, the inflammation is severe or assumes a chronic condition, these adhesions gain in extent and strength and give rise to all the variety of conditions classified by Treves as "strangulation by bands." In most cases where these adhesions occur there is a history of constipation. It is probably due as much to the pain caused by defecation as to interference by the condition. Again, the pain is often so great as to

mislead the physician into thinking that a more virulent inflammation exists than really does. But the pain is not always proportionate to the amount of mischief. I have seen cases in which a mere omental adhesion has caused most agonizing pain. For instance, I recently saw a case in consultation, a woman who had had the appendages removed for backache some time before, and who suffered excruciating pain, especially on defecation. In this case the only lesion found was the omentum firmly adherent to the original incision. The omentum here was much elongated, and the transverse colon was dragged below the level of the umbilicus. In like manner I have seen the omentum adherent over the entire pelvis, dragging the transverse colon so out of place that a twist or kink of the bowel could be very easily formed. It is not at all rare to find the vermiform appendix glued fast to the uterine appendages, while almost any loop of the small intestines may become adherent to the inflamed pelvic viscera. As I have said, these adhesions vary in extent and density from those that will tear like wet tissue paper to those so well organized that it requires the scissors to release them, and it is not rare in pus cases for the bowel to be almost gangrenous about these points of adhesion and, in fact, to tear through. That adhesions do not cause complete occlusion at the time of their formation oftener than they appear to is no reason for regarding them lightly, for Mr. Treves tells us in the series of cases he studied that the average duration of the interval between the causation and the obstruction was three years; the shortest period being five weeks and the longest twenty-one years. In view of these general considerations it is hardly necessary to insist upon the release of the intestine wherever and to whatsoever extent adhesions exist. For if the surgeon leaves adhesions when he closes the abdomen, he leaves a probable cause of future serious trouble.

DR. WILLIAM GOODELL said that his experience in ovariectomy led him to say that it is a mistake to postpone the opening of the bowels to a late period. He used to follow the old plan of not giving a cathartic until the eighth day, but he was confident that he had had death result from intestinal kinks, from adhesions, making it impossible for the bowels to be moved. He now gave an aperient or an enema on the fourth day, and earlier if any symptoms such as vomiting and tympanites, present themselves.

DR. B. F. BAER said that once he had kept the bowels confined after laparotomy, but now he had them moved on the second or third day, rarely as late as the fourth day. Allowing a pint of warm water to flow into the rectum facilitates the passage of flatus and feces. He had a case four years ago in which very serious collapse occurred at the end of the second day. Stercoraceous vomiting set in and large quantities of flatus were

passed by the mouth, but none by the anus. These symptoms were thought to be due to obstruction, and reopening was considered, but not done. The patient recovered, although she did not pass flatus for five days. Should such a case occur again he would open the wound and would have the endorsement of most operators for so doing. Large doses of salines are advised in such cases, but he wondered if there was not some danger of rupture of the bowel in these cases of adhesion after serious operations, and he related a case. Dr. Price had referred to two cases where he reopened the abdomen for pain, and found the omentum adherent to the line of incision. He knew of no better way to prevent this accident than the early use of laxatives.

DR. WM. L. TAYLOR read a paper on

#### FIXED UTERI.

In looking over his case book he found the remark, "uterus fixed," so often noted, so often underscored, as much as to say "here again," that he fain would ask how many of these cases were, in their inception, recognized as cases of peritoneal inflammation? In a number the note is made, "patient had attack of inflammation of bladder." "Inflammation of bowels" has been of alarming frequency, whilst "congestion of the liver" makes him wonder at the special degree of sensibility of that organ in women. In a series of cases where the lymph deposit seemed to be the most diffused, a positive history of an active and acute inflammatory trouble could not be obtained. There was only the history of a continued abdominal pain and tenderness, dating from an abortion, from heavy lifting, seldom from normal labors, and presumably never from gonorrhœal infection; seldom—I might say never—have I had perfect success in my efforts to trace the cause to this infection. The history of the husbands, as to the existence of a gonorrhœa or gleet, at the time of commencement of pelvic trouble, is, in the vast majority of cases, worse than uncertain. In several of the subacute cases the only ascribable cause appeared to be indirectly, if not directly, the effort to prevent conception. Freedom from the possibility of, at least, paternal cares, leads to an amiable weakness, and coition follows coition in quicker succession than the law of conservatism would recognize, and, plus the menstrual congestions, which now even anticipate, without the restful periods of pregnancy and lactation, congestion and inflammation of the peri-uterine tissues follow. That this is as immediately the cause of the fixed uteri, the thickened and enlarged ligaments and tubes, and tender ovaries, as is gonorrhœal infection, even in prostitutes, I am inclined to believe. Where the deposits of lymph were more localized or larger in quantity, seeming as if it had been poured out quickly, and had by gravity centered



itself around the uterus, there were histories of acute, well-marked attacks of cellulitis or peritonitis. The causes were difficult labors with badly lacerated cervixes, these lacerations extending through into the cellular tissue; and also criminal abortions. In these cases, how often traumatism and how often septic poisoning was the exciting cause it is impossible to say. Catching cold while menstruating, falls, and various other accidental causes were among the number. The average physician, as soon as the patient is up out of bed, shakes himself by the hand and says, "I have cured my patient." But he hasn't! There is still the important sequel to deal with, the lymph deposits. In fully three-fourths of all the cases the body of the uterus has become fixed in retroflexion, even in multipara. Just as soon as the uterus feels the stimulus of congestion or inflammation of surrounding tissue, it becomes turgid and heavy, and sinks decidedly lower in the pelvis until the cervix is near the vulvar orifice, and following the curve of Carus, the fundus is retro-displaced. Here it is, as it were, frozen in, fixed immovably. All around it is a mass of inflammatory lymph, becoming more dense and resisting as organization advances. In the centre of this the sound probably indicates the uterine body with a measurement of  $3\frac{1}{2}$  inches. The cavity is tender and the cervix softened, congested with venous blood. Now this deposit varies greatly in quantity as the inflammation has been, by judicious treatment or by nature alone, limited or allowed to involve a great extent of peritoneal surface. The possibility of determining the amount of lymph deposit and the degree of fixation by bi-manual examination seems to me to be one of the few certainties in gynecological practice. A uterus which is low in the pelvis and which cannot be raised to the normal line, and a fundus which is retroflexed and cannot be repositioned, with the other evidences, bi-manually, of thickening and deposit, cannot but point to the certainty of previous inflammation. A sterile uterus and a fixed uterus seem to be almost synonymous.

The need of shortening attacks of pelvic peritonitis, aborting them if possible, can only be appreciated by those called upon frequently to treat the sequelæ.

If these are thoroughly treated the amount of lymph thrown out is small and probably will be absorbed almost as rapidly as it was thrown out. But we meet a case which was treated by "the other doctor around the corner," and the uterus and its appendages are imbedded and immovable. Now what are we to do? The great object is to get rid of as much of this effused matter as we possibly can. The older and more thoroughly organized this becomes the less chance there is of rapid and complete absorption. So the moral is, commence early. It is going to do one of three

things: undergo absorption, break down and form pelvic abscess or become organized, acquiring an adventitious circulation. In a case of recent or comparatively recent deposit he commences treatment by correcting the digestive tract, getting the stomach, liver and bowels in better condition and surface circulation is stimulated by warm baths and frictions. He then gives mercuric chloride, with the iodide, commencing with small doses frequently repeated and gradually increasing the dose and lengthening the time. Locally he relies upon the abdomino-vaginal galvanic current and gentle or more decided uterine massage, as there is great or little tenderness. This uterine massage he prefers in cases of long standing, where the tenderness has disappeared, but still used carefully where there is tenderness, he finds it beneficial. Every other day, or twice a week, make steady pressure upon the fundus of the uterus with the index finger of the left hand in the rectum and upon the cervix and body of the uterus with the right index finger in the vagina. This pressure is kept up for two or three minutes, gradually trying to force the body upwards and forwards. Then efforts at lateral movement for the same length of time. This massage is followed with the continued galvanic current, using the abdomino-vaginal method. For the breaking down of pelvic lymph he has not used electro-puncture, preferring the slower and as certain absorption by the stimulation of pelvic circulation. Where there is tenderness he uses the positive pole in the vagina and the negative over the abdomen for the first three or four applications and it is marvelous how rapidly this tenderness disappears. He then reverses the poles, using the negative with a ball or small crescent-shaped electrode in the vagina. These *séances*, including the massage, last for about fifteen or twenty minutes. The strength of current averages about 25 to 30 milliampères. After this is over he frequently packs the fornix with wool, introducing a small ring pessary to keep the wool as much as possible in position. After he gains a certain amount of mobility he introduces a Smith-Hodge pessary, small at first, increasing to a more suitable size as the uterus rises to the normal line. Tincture of iodine to the fundus of the vagina.

DR. T. HEWSON BRADFORD read

#### NOTES OF GYNECOLOGICAL CASES TREATED BY ELECTRICITY.

DR. B. C. HIRST thought it was a gratifying fact that we were advancing in this branch of therapeutics. It seemed that for a time we did lag behind other gynecological centers. He tried electricity some time ago but with very little result, because he had, he thought, used too weak a current and because he did not thoroughly un-

derstand the application of electricity in gynecology. He thought that much of the criticism of this kind of treatment had been ill-considered.

(To be continued.)

### Gynecological Society of Boston.

*Regular Meeting, Sept. 13, 1888.*

THE PRESIDENT, HORACE C. WHITE, M.D., IN THE CHAIR.

A letter was presented by the President from Dr. Herbert J. Harriman resigning on account of ill health, his position as Secretary of the Society which he had held for nearly four years. The resignation was accepted and it was unanimously voted that "the thanks of the Society be extended to Dr. Harriman for the able manner in which he has acted as Secretary."

DR. F. L. BURT presented some curettings of the uterus with the following history: The woman, æt. 67 years, had suffered from uterine hemorrhage for five years, during which time she had obtained temporary relief three times, after as many operations by different doctors. Last November Dr. Burt operated, removing by the curette about one-fourth pint of material from the interior of the uterus. This was pronounced to be adenoma. This operation again gave temporary relief, and it was repeated last May, when about the same amount of material was removed; but this time it was found to have undergone carcinomatous degeneration. Total extirpation of the uterus was performed, after which the patient recovered. The uterus was exhibited.

A pus-sac was then shown which had been removed by laparotomy from another patient.

The paper as announced for the meeting,

#### ANTISEPTICS IN GYNÆCOLOGICAL AND OBSTETRIC OPERATIONS,

was read by Dr. F. L. Burt.

DR. A. P. CLARKE said that he had long ago given up the use of the sponge-tent, believing it to be unsafe. Iodine is a good antiseptic, but corrosive sublimate is the most powerful of all. Less of it is needed, however, if alcohol has been used to bathe the parts previously, *e.g.*, on the abdomen previous to a laparotomy. One of the objections to corrosive sublimate is its decomposition by albumen, with the formation of albuminate of mercury. The doctor thinks we should all have some ideas concerning the use of antiseptics and carefully apply them. Dr. C. has introduced the sound a great many times, and has taken pains to have it antiseptic, and he uses iodine afterwards to lessen the danger from introduction of germs. Intra-uterine injections

have proven unfavorable, as a rule, in his hands, and he believes that there is danger of forcing air into the Fallopian tubes.

DR. WM. G. WHEELER said that we are apt to overlook other things when considering antiseptics, *e.g.* drainage, which the reader had not mentioned at all. Drainage is important. We must be careful not to shut up the enemy in trying to bar out the germs.

DR. R. E. BROWN asked what precautions the reader recommended when examining a woman during labor? (Answer by Dr. Burt: Hot water and soap are often sufficient, but we may need corrosive sublimate besides.) Dr. Brown said that he always washes his hands thoroughly and then dips them into a solution of corrosive sublimate. He had lately delivered a woman of a child which had been dead some time, and there was no trouble afterwards.

DR. W. O. HUNT said that he wanted to emphasize *antiseptic midwifery*. Cleanliness is the most important thing. It is necessary to scrub, not simply dip, the hands in corrosive sublimate solution. For a lubricant he prefers a solution of corrosive sublimate 1 to 2000 in glycerine. He considers the pad a great comfort. These are made by the nurse, who folds up a considerable quantity of salicylic cotton in a square of cheese-cloth, and then bastes it to keep it intact. Next the vulva he places a small piece of absorbent cotton, which has been dipped into corrosive sublimate solution. The nurse should never touch the patient without having first previously used the solution of corrosive sublimate. We should not then see the temperature rise. Dr. Hunt never uses the vaginal tampon.

DR. C. W. STEVENS said that he had solved for himself the question of carrying antiseptics safely and in a convenient form. Carbolic acid cannot be carried without the risk of injuring the bag, but he always has with him salicylic acid and corrosive sublimate. For the salicylic acid he carries a small box which contains just  $7\frac{1}{2}$  grains, and this added to a pint of water makes a solution 1 to 1,000. This solution he uses for the instruments requisite for suturing and for the obstetric forceps. The corrosive sublimate he carries in the form of tablets, one of which, added to a quart of water, makes a solution 1 to 2,000. Into this, after diluting, he dips a clean napkin, which is then wrung out as dry as possible, and placed, while still moist, against the vulva. The patient finds this comfortable and likes it as well as the pad. He also carries corrosive sublimate soap which makes a good lather.

DR. ESTHER HAWKS remarked that many patients cannot supply themselves with the materials that have been advocated, and moreover, among the poor patients there is generally no nurse to carry out such instructions as have been given. Water and soap, however, can always be obtained,

DR. A. F. A. KING had given very little attention to monstrosities. He would exhibit a case of coalition of the faces of a monster, at the next meeting. He supposed the development had been in one of the ways mentioned by Dr. Lamb.

DR. SCHAEFFER said this subject could be studied by observations upon the vegetable world. It is more than probable that in such cases there is more than one spermatozoon. We cannot judge of the anomaly of development from the specimens in the Museum. Some time ago Dr. Bayne asked him to see an an-encephalous child. Its head receded above the brow and it had a hare-lip. It was alive and was very repulsive as it breathed. Its parents would not allow it to be exhibited and so buried it. Dr. Lamb had mentioned heredity as bearing an important relation to such monstrosities, but forgot to say anything about consanguinity of parents. In Bayne's case the parents were first cousins, but presented very few similar traits either of person or disposition. The mother had a forboding that something would be wrong. The second pregnancy was a miscarriage. He asked Dr. Lamb if consanguinity had ever been looked on as a cause of monstrosities.

DR. LAMB: Experience and observation have shown that consanguinity has less influence in the production of such interruption of development than was formerly supposed. All authors are now of the opinion that twin, triple and quadruple monsters are from one ovum.

DR. J. FORD THOMPSON reported two cases in which he had removed

#### SUPERNUMERARY FINGERS AND TOES.

Two years ago he operated on the first case and removed the supernumerary fingers. A short time ago he removed the supernumerary toes from the sister of the first patient. He obtained the history of this peculiarity in two other members of the same family; the members had been tied by physicians and fell off. He thought it quite remarkable that there should be four similar cases in the same family. He thought heredity had a great influence in such false developments. Eight years ago he had operated on a child for hare-lip with success. He had been recently called to a child of the sister of this patient who had a hare-lip worse than that of the first case. In the latter the vomer projects beyond the nose. There were two cases in this family, but he could not trace it any farther back. He did not think that maternal impressions had any influence on such deformities, as the development was too far advanced, especially in hare-lip and cleft palate, from the period when the impression is said to be received.

DR. KLEINSCHMIDT desired to make an addendum to Dr. Lamb's remarks, by stating that

twins coming from *one* ovum were always of the same sex; hence, joined monsters coming as they did from one ovum, were always of the *same* sex.

## STATE MEDICINE.

### Sanitary Convention at Hastings, Michigan.

REPORTED FOR THE JOURNAL.

A sanitary convention, under the auspices of the State Board of Health, was held in Hastings, Michigan, December 3d and 4th. The five sessions were well attended, and the interest seemed to increase to the close. On each subject there was a paper or address, followed by discussion. The subjects discussed were those which should and did interest the citizens, and included "The Water-supply of Hastings," "The Disposal of Excreta and Waste in Hastings," "Plats of Localities in Hastings"—showing exact relative positions and distances between wells, privies, etc., "The Prevention of Communicable Diseases," and the "Duties of the Local Health Officer." This last subject was treated by D. E. Fuller, M.D., himself the local health officer, and by Henry B. Baker, M.D., Secretary of the State Board of Health. Dr. Baker pointed out how lives and money can be saved in a locality by the appointment of a health officer, if the people and the health officer will co-operate for the restriction and prevention of scarlet fever, typhoid fever, diphtheria, etc. He showed how at least one physician in a village or small city can be employed to prevent instead of cure disease, with pecuniary profit to the people and at least a salary to the physician of not less than one thousand dollars a year. His paper was substantially as follows:

Inasmuch as our health officers exist for the purpose of protecting us from dangerous diseases, we may get an idea of what are their most important duties by finding out what are the most important dangers from which they should protect us.

In Michigan, the five diseases which cause the most deaths are: Consumption, diphtheria, typhoid fever and scarlet fever.

#### DIPHTHERIA.

Concerning diphtheria, which is next to the most fatal disease, health officers in Michigan now generally know how to restrict it, and thereby to save hundreds of lives. If you ask how do we know that they know how, I reply, some of the health officers in Michigan are doing this all the time, and we have the facts to prove it; and to prove how it is done. For instance, in 1886, 461 outbreaks of diphtheria were reported to the office of the State Board of Health, and the health

officers were requested to report just what was done to restrict the disease, and how many cases occurred in each outbreak. If under one method of work or neglect to work the disease spreads, and under some other method of work the disease does not spread from the first cases, we can find it out if we devote sufficient thought and work to the compilation of the reports which the health officers make, provided they report the exact facts. I am sorry to say that in about 240 of the outbreaks the health officers did *not* report with sufficient accuracy so that we could tell exactly what they did do; but in about 200 outbreaks they *did* report distinctly, and, of these about one-half had secured isolation of the first cases and the thorough disinfection of infected things, while the other half had not secured both isolation and disinfection, although some of them had secured one or the other of these important measures. Careful compilation of all of these reports showed that in those outbreaks in which either isolation of the sick, or disinfection of infected things had been neglected, the disease had spread so that there were five times as many cases, and five times as many deaths as there were in those outbreaks in which both isolation of the sick and infected, and the disinfection of all infected places and things has been accomplished. In the 116 outbreaks in which all this was done there was apparently a saving of about 300 lives and 1,500 cases of sickness from diphtheria. Of course it is easy to find fault, and to say: "What a pity these measures were not carried out in all of the 461 outbreaks instead of only in the 116," but we should not lose sight of the fact that there was a positive saving of several hundred lives in a single year, from one disease, and that the compilation of the reports proved how it was done, and how it might be done again, namely, by thorough and careful isolation and disinfection under the direction of a capable and efficient health officer. And now very much the same thing has been done again, as is shown by the compilation of the reports of the health officers in Michigan for the year 1887.

#### SCARLET FEVER.

What I have said relative to diphtheria is applicable, with slight variation, to scarlet fever. The compilation of the reports of the health officers in Michigan relative to scarlet fever during the year 1886, showed that in the fifty-eight outbreaks in which disinfection had been thorough, the disease had not spread much, while in those outbreaks in which isolation or disinfection had been neglected there were over five times as many cases and over five times as many deaths. The compilation of the reports relative to scarlet fever in the year 1887 has demonstrated that the year 1886 was not exceptional, the saving of life and health was again apparent.

#### TYPHOID FEVER.

The measures for the restriction of typhoid fever are not the same as for diphtheria and scarlet fever, and the evidences of success have not yet been so well elaborated, but I feel confident that a considerable proportion of the sickness and deaths from this disease may be prevented, by measures which are described in a pamphlet, copies of which are distributed in this audience. Some of the essential measures need the efforts of the health officer to make them more effective; but in all of these diseases the co-operation of the people with the health officer is important.

#### WILL IT PAY TO HAVE A HEALTH OFFICER?

It is plain, then, that some of the most fatal diseases that affect us may be in great part prevented, and that much depends upon the knowledge and efficiency of the local health officer.

It is plain, too, that the measures by which these diseases are prevented are *not* those which in old times we associated with the duties of the health officer. The abatement of ordinary nuisances should probably be attended to by the health officer; but the abatement of nuisances may have very little to do with the prevention of diphtheria or scarlet fever; while it is certain that *isolation and disinfection of infected persons and things, will save lives.*

But when the health officer comes into very close relations to cases of some of these dangerous diseases, he must himself refrain from going directly to some child to whom he may carry the disease; and so he must lose his practice. He will also lose much by the antagonism of those whose movements he will cause to be restrained. Consequently, whenever there is an outbreak of one of these diseases, if he attends to his business as health officer, it is probable that he must relinquish his other means of income. Is the public prepared to guarantee him, say, ten dollars a day during the outbreak? Is the public prepared to ensure him against loss by reason of his necessary action as an efficient health officer? If not, is the public willing to give him such a fixed salary as will induce the health officer to take his own chances of loss?

My belief is, that, except in Detroit and Grand Rapids, there are few, if any, cities or villages in the State, where these questions have been properly met in the interests of the people. Therefore, either the health service is not what it should be, as is the case in many places, or it *is* what it should be, simply through the public spirit or philanthropy of some physician, as I am glad to testify is the fact as regards many of the cities and villages in Michigan.

Perhaps you may think I am wandering from the subject of the duties of the health officer and am giving a rather broad hint as to the duties of the people or their representatives to properly

support the health officer; but it is necessary to examine into the question in some such manner, in order to see how it is possible to have a health officer who can afford to perform his duties faithfully. Taking into consideration the prospective losses in various ways, my own view is, that no physician can afford to file his oath of office in the city of Hastings, unless he is assured of a salary or compensation averaging a thousand dollars a year. Can the City afford to give that much? Let us examine into the facts.

#### MANY LIVES MAY BE SAVED AND MONEY TOO.

The population of Hastings is about three or four thousand. If its death-rate is about the average, the annual deaths number about sixty. Then about seven or eight of these are from consumption, about five from diphtheria, about two from scarlet fever, and about two from typhoid fever. These numbers may not be exactly true for last year, but for a long series of years they are an approximately true average.

From the experience of the health officers in Michigan during the years 1886 and 1887, I have demonstrated that at least 80 per cent. of the cases of the sickness, and 78 per cent. of the deaths from diphtheria are prevented by those who secure, after the first case has occurred, complete and thorough isolation and disinfection, such as an efficient health officer can secure when his people co operate with him for that purpose. Therefore, the lives of at least four persons in Hastings can be saved each year, on the average, from that dreadful disease diphtheria. There may be single years when diphtheria may not come to Hastings and then some parsimonious grumbler might wish to cut down the salary of the health officer, perhaps after the same health officer had in some way prevented the first case being brought in, as, for instance, by preventing a public funeral over the body of one dead from diphtheria, and brought here for burial; but I think you can be assured that, in these days of rapid transit and constant movement among the people, Hastings is in *danger* of having diphtheria brought here every year, and you need a health officer constantly on guard and in close correspondence with the central office at Lansing, so that, at a moments notice, he may take action to prevent the introduction, or if that is impossible, then to prevent the spread of this, one of the most dangerous diseases to which our children can be exposed.

#### LIVES MAY BE SAVED FROM SCARLET FEVER.

Then, too, nearly the same remarks apply to scarlet fever as to diphtheria; although in recent years the deaths in Michigan are not so numerous. Yet, taking the average of years in Hastings, at least one death per year from scarlet fever should be saved by prompt and thorough action, even after the disease has been introduced,

and, of course, the most important service of a health officer is to prevent the introduction of such a dangerous disease.

#### CONSUMPTION SHOULD BE LESSENED.

Enough is now known of the causation and spread of consumption, so that this most important cause of death should be very greatly lessened; and it may be lessened by spreading among the people information concerning its causes and just *how* it may be in great part prevented. An intelligent and faithful health officer, whose time was not otherwise demanded for the practice of medicine to support his family, might do much to put before the people whom he was adequately paid for guarding, the facts collected by sanitarians and State Boards of Health, which would enable them to guard against this disease, which is so fatal to people at those ages at which they should be in the prime of life. At least one death per year in Hastings should be saved from consumption.

#### LIVES MAY BE SAVED FROM TYPHOID FEVER.

Some one, familiar with the ways in which typhoid fever is spread, has said that for every death from typhoid fever some person should be held criminally responsible. I should not agree with that, because I think that, among a large proportion of the people, the ignorance, which still permits the disease to spread, should be pleaded in extenuation. But intelligent health officers can inform the people under their care how to restrict the spread of typhoid fever, and how to do many things which tend to prevent the occurrence of the first case in a community. At least one death a year in Hastings from typhoid fever ought to be prevented; and the person saved would be most likely to be in the middle age when his work would be most productive.

Thus an efficient health service, having thorough co-operation of the people, should save in Hastings each average year seven lives, five of the persons being children and two grown persons. I do not say positively that exactly so many were saved during the past year, but I do claim, that on an average, this number can be, and should be, saved over and above what would occur without such efforts as those I have suggested. I claim that the health officer should earn and have a thousand dollars a year, to supervise the work, and that all of your people should aid him whenever it is necessary, and that expenses should be incurred by the city and by individuals which might aggregate another thousand dollars; and that your people would not only save those seven valuable lives of children and friends most dear to you, but that, by this outlay, money would actually be saved which otherwise is lost; that is, if the money were judiciously expended and you secured the efficient service which I have indi-

cated. Let me point out just how some of the saving would occur:

#### THE MONEY VALUE OF WAGE WORKERS.

Political economists sometimes estimate that an average man in the early part of the productive period of his life will afterwards earn, over and above what it will cost to support him, one thousand dollars. It is within the memory of some of us that a healthy negro slave could be sold at the south for eight hundred or a thousand dollars, and we will all admit that slaves were not the most industrious persons either. Now if we save from death, and in good health, two adult persons in Hastings in each year, we have saved in money value to the families to which those persons belong probably the full amount of the two thousand dollars a year, which I advise you to spend on your health service. Then there are the five children which are saved from diphtheria and scarlet fever. They have cost hundreds of dollars for their maintenance, and if they die all is lost, but if their lives are saved they will soon reach the productive age. They are worth to their families, for what they will cost and earn—say one-fifth of the value of an adult person; or another four thousand dollars which we may look upon as profits on our two thousand dollar investment. A 50 per cent. profit ought to satisfy any tax payer in the city. And if one of these children chanced to be your own, or the adult the bread-winner of your own family, the arguments should be convincing; but there is another alternative suggestion which is illustrated by a remark that I recently heard at the meeting of the American Public Health Association: Dr. Smart, of the U. S. Army, was deploring the slowness of the people in public-health work, and said there was little comfort to be had from the thought that years in the future when your name is mentioned, some one will say: "Yes, I knew him well; he died, prematurely, eight or ten years ago of typhoid fever." Well, precisely that may be said of any one of us, because the safety of each one is bound up with that of others; no man lives to himself alone; not only is he his brother's keeper, but his brother, his fellow citizen, and even a person in a foreign land may send him something, or do that which will endanger his life. In fact, I suppose that all of our dangerous communicable diseases are brought to us—we do not create them, and much can be done by ourselves, by our families, by the community, and by the health department of our local government (which exists for our common safety and welfare) to protect us from diphtheria, from typhoid fever, and from the other dangerous diseases which may be prevented or restricted.

Attend the next Annual Meeting.

## DOMESTIC CORRESPONDENCE.

Medical gentlemen writing to the Editor of THE JOURNAL will please conform to the rule requiring MS. to be written on one side of the paper, to take pains to write the names of persons and places legibly, and to send their own names as a guarantee of good faith.

### Should Syphilitics Marry?

*To the Editor:*—Some questions that are not clear to my mind in the light of my present knowledge.

1. Is syphilis a curable disease? or is it possible to eradicate all the syphilitic germs from a syphilitic?
2. Is not a person once a syphilitic always a syphilitic?
3. Is the germ of tertiary syphilis the same as the germ of secondary syphilis, and also the same as that germ which causes chancre? or is their virulency modified by removal from the chancre?
4. Is it possible to inoculate a non-syphilitic by serum or secretions from a tertiary syphilitic and produce a syphilitic chancre?
5. Should syphilitics marry? and when?

In the light of my present knowledge I believe syphilis is not entirely a curable disease. Whilst it may be modified by specific and timely treatment, I believe it is impossible to eradicate completely all the germs in a syphilitic, so that I think that a person once a syphilitic is always a syphilitic. A syphilitic may seem to be to all intents and purposes cured of the malady, yet it is apt to make its imprint manifest on some of his or her children.

I believe the germ that produces chancre is the same, and has the same virulency, as that which circulates in the system during secondary and tertiary syphilis, and so long as there is a single syphilitic germ in the system such a person is a syphilitic and may convey the disease to others in various ways. For that reason I would say a syphilitic should never marry. It would be better for the State that he never married. It has been my experience that a syphilitic, no matter in what stage, or how completely cured he seems to be, is liable to inoculate his wife with the disease, or some of his children may inherit it.

From what I have said, I am induced to produce the following cases of the many that have come under my observation.

P. Q. contracted syphilis when he was 25 years old. Married at the age of 34 years a perfectly healthy blonde of 21 years of age. When he married he had not undergone any regular treatment, but was in every way, so far as appearances indicated, a perfectly healthy man, except a leaden appearance that he presented. His kidneys and liver often become torpid. He is strictly a temperate man and takes exceedingly good care of himself. The wife has one child by him, a boy nearly 5 years old. The child is apparently healthy and fat, and large of his age. Whilst carrying the child the mother presented the char-



acteristic symptoms of secondary syphilis, which was either conveyed to her from the father through the child or from the semen of the father. Mrs. P. Q. weighed 125 pounds when she was married, but was afterwards by the effects of the disease reduced in weight to 105 pounds. The child has not as yet presented any indication of having inherited the disease.

B. R., a young man of scrofulous diathesis, inherited from his father, who had had syphilis. B. R. contracted syphilis, after he had had a very bad ulcerated leg, when he was 20 years old. I treated him specifically for two years. He married a blonde 21 years of age when he was 25 years of age, and now has two children by her, who are apparently healthy. The wife so far has also escaped the disease.

A. B., a young woman æt. 21 years, contracted syphilis and underwent a mercurial form of treatment for one year, after which she was married and had two children, a boy and a girl, now respectively 16 and 18 years of age. They appear to be entirely healthy, although in childhood they presented the characteristic symptoms of inherited syphilis, and were so treated. The mother has since died with syphilitic disease of the liver.

A. R., a young man æt. 25 years, contracted syphilis and was treated with mercury for two years. He then married and the first child was a still-born, having died *in utero* and become macerated before birth. Whilst carrying a second child Mrs. A. R. was treated with mercury, and the second child was born alive and is still living. She has had several children born alive since that, all are now living and apparently well. The mother never contracted the disease from the husband.

J. P., a young man æt. 21 years, contracted syphilis. He was treated with mercury two years. He married at the age of 25 years. His wife bore him three children; one died soon after birth, of imperfect development of the heart, and the second died during the second summer of inherited syphilis, but the third is still living and apparently healthy. The mother does not show any symptoms of the disease.

A young man contracted syphilis when he was 18 years old and was treated with mercury for two years. He then married and had one child. The child has symptoms of having inherited the disease, although the father and mother are apparently healthy.

A man married a woman suffering with tertiary syphilis. The husband contracted the disease from the secretions of his wife in the form of a chancre in the urethra or that of a gonorrhœa. The husband never had any buboes, but had all the symptoms and evils of the dread disease.

I have said syphilitics ought not to marry: as far as the disease in my opinion is a curable one

I would adhere to my stated opinion. If it could be cured in such a way that there would be no possible chance of transmission I would say marry, but my experience and observation have taught me that syphilis is not a curable disease and is oftener than otherwise transmitted to posterity, even when it has received a scientific and prolonged treatment. If also with the view of final eradication of the effects of the disease from the posterity of a syphilitic by proper selection I would say marry, for I believe it is only through proper selection and for a long time that the effects of syphilis can be finally eradicated from the posterity of a syphilitic.

JOHN M. BATTEN, M.D.  
Pittsburgh, Pa., Jan. 12, 1889.

### Should Antipyrin be Used During Parturition or Gestation?

*To the Editor*.—During the last year or two I have quite frequently noticed in current medical literature references to the beneficent influence exerted by antipyrin in modifying the pain and suffering of labor. In one case in my own practice I administered it with decided advantage, the suffering being much mitigated, and were it not for one question that presented itself to me, would have used and continue to use it frequently. The question to which I refer is this: May not the influence of the drug in inhibiting or suppressing the secretion of the milk more than counterbalance all advantages derived from it as a pain obtunder?

How much influence it exerts over the lacteal secretion has not as yet been clearly determined, but I have recently seen in the medical journals a number of laudatory notices of its marked effect in suppressing milk secretion. In the *Medical News*, of Dec. 8, 1888, page 645, T. Haven Ross, M.D., reports a case in which it exerted a marked influence and gives reference to other journals corroborating his experience. These facts I deem of sufficient importance to put every physician on his guard against an indiscriminate use of the drug as a pain alleviator during parturition and lactation, at least until it has been definitely decided how much influence it does exert upon the lacteal flow. The percentage of American women who nurse their infants without any assistance from artificially prepared foods, is not so great as to justify physicians in administering a lactifuge for the many rheumatic, neuralgic and other pains for which this remedy is now so universally used.

Let those who have abundant clinical facilities elucidate this question so that all physicians may be able to use the remedy intelligently and subserve the best interests of their patients.

E. STUVER, M.S., M.D.

Rawlins, Wy. Terr.



### The Choice of Five Journals.

*To the Editor:*—I have not received THE JOURNAL of the 12th inst. as yet. Is it the fault of the mailing clerk, or of the mails? I cannot afford to miss a single number of THE JOURNAL, as it is my choice out of the five weekly journals that come to my office. Please send me the one of that date, and oblige,

Yours truly,  
T. C. KENNEDY, M.D.

Shelbyville, Ind.

### The San Francisco Coroner.

*To the Editor:*—In connection with an item on p. 885, of the issue of Dec. 22, of your esteemed journal concerning the Coroner of this city, allow me to remark that the then incumbent is a medical man, and that the non-medical coroner is for once not at fault.

Yours truly,

OBSERVATORE.

San Francisco, Cal.

## NECROLOGY.

### Robert McLure Fairleigh, M.D.

DR. ROBERT M. FAIRLEIGH was born in Brandenburg, Meade Co., Ky., on January 17, 1840, and died at his residence in Hopkinsville, Ky., on October 19, 1888, being in the 49th year of his age. He studied medicine under Dr. H. K. Pusy, of Garnettsville, Ky., and graduated in the class of 1860 of Jefferson Medical College, Philadelphia, some months before he attained his majority. At the beginning of the Civil War, when under 22 years of age, he was appointed Assistant Surgeon of the Third Kentucky Regiment, U. S. Army. Though very young, and of course without experience, his natural talent for surgery as demonstrated by his skill when it was demanded, and his devotion to the sick under his charge, caused him to be promoted in June, 1862, to the rank of Surgeon of his regiment, which position he continued to fill with ability and satisfaction until the termination of the War, when he was appointed Medical Director of the Western Department of Kentucky, with headquarters at Bowling Green, where he married Miss Annie Slaughter, of Lane Co., Ky., on May 17, 1865. In July, 1865, he resigned his commission in the Army and moved to Hopkinsville, Ky., where he immediately engaged in general practice, and where he continued to live and labor in his profession up to a few weeks before his death. During the twenty-three years of his residence in Hopkinsville he found but little time for recreation; being devoted to his profession and the welfare of his patients, his services were in constant demand from a large clientèle. He was a member of the Kentucky State Medical Society, of the

McDowell Medical Society and of the Christian County Medical Society; was President of the latter and for several years its Secretary. He was eminently progressive and public-spirited, as a member of the Board of Councilmen of his adopted city. He inaugurated many measures for the public good.

As a general practitioner Dr. Fairleigh had few superiors. As an old patron said of him, he was prompt, skilful and safe. As a surgeon he was dexterous, but eminently conservative, ever striving to avoid mutilation and to save all that could prove useful to his patient. As a gynecologist he kept himself abreast with the progress of the day, and was very successful in the treatment of diseases of women. He was an accomplished obstetrician.

He was the embodiment of sound social and professional ethics, was a favorite with all his medical acquaintances and the most popular doctor I ever knew. He was an elder brother to the younger members of the profession. All who had the talismanic letters M.D. attached to their names, whether merited or not, received the same polite attention when calling on him in his office as did the most distinguished and veteran practitioner. He would extend to the merest tyro in medicine the same urbanity and patiently listen to what they had to say with the same attentive consideration that was extended to the most accomplished members of his profession. His professional modesty was proverbial with all who knew him. His only ambition consisted in being thoroughly prepared to meet any all demands of a local practice of medicine and surgery. If the unselfish love for the honor of the profession as invariably practiced by precept and example in the life of our departed friend could animate the entire guild there would be no necessity for the written code of medical ethics.

J. P. THOMAS, M.D.

## BOOK NOTICES.

L'ENSEIGNEMENT ET L'ORGANIZATION DE L'ART DENTAIRE AUX ÉTATS UNIS. Par Le DR. KUHN. 8vo, paper. 1888.

Many of our readers who attended the Ninth International Congress, will remember with pleasure the rotund and happy Dr. Kuhn who attended the Dental Section and spoke English with fluency. He came to this country under orders from the Minister of Public Instruction of France, to investigate and report upon the existing State of the practice of dentistry in the United States. He faithfully executed the commission, and this elaborate book, well illustrated, is the result. In it he gives the history of each dental college in the United States, gives their

methods of instruction, describes their buildings, and finally gives the laws relating to the practice of dentistry in each State and Territory in the Union. Thus it will be seen that it constitutes a useful compendium for those interested in that branch of Medical Art. In a supplement he briefly describes the status of dental instruction and practice in England and Germany. He laments the fact, that in France the practitioners of dentistry are neither on the same plane with those of other countries, nor is the French system of instruction at all equal to that of the United States. He puts the question in this way: "Let us take two young men equally intelligent, leaving at the age of 18 to pursue the different systems. One studies medicine and works hard for 8 years; the last year he becomes an assistant at the office of a dentist, from which he shortly becomes doctor.

"The other enters as an apprentice and passes all the grades of a school; he commences as apprentice, then a mechanic, then an operator, and when he shall have passed two years or less in a working office he may then establish himself. Which is the better practitioner of the two? For an impartial man of affairs, no doubt is possible.

"The possession of a medical diploma, never constitutes a guarantee of professional superiority." Dr. Kuhn's work, as it deserves to be, has been well received in Paris, and as a book of reference on this subject it will always be of value.

## MISCELLANY.

**TRAINING OF SOLDIERS IN NURSING DUTIES IN THE EAST INDIAN ARMY.**—The following rules proposed by the Surgeon-General, Her Majesty's Forces, for the training of soldiers in nursing duties, have been approved by His Excellency the Commander-in-Chief, and are published for guidance:

1. A certain number of men, who may voluntarily present themselves, and who as orderlies in attendance upon serious cases of illness, have shown an aptitude for this work, shall be trained in nursing duties, so that they may be available for assisting in the care of sick comrades when required, and for duty in time of war in hospitals in the field.

2. The course of study, which is entirely distinct from the training of stretcher bearers, to comprise the subjects contained in Part II of the Manual of the Medical Staff Corps.

3. Each course to consist of twelve lectures, and to extend over a period of three months; the theoretical portion being supplemented by practical instruction in the hospitals. Two courses of lectures to be given in the year, in such British Garrisons as the General Officers Commanding Districts, in consultation with Deputy Surgeons-General may decide, the number of men attending each class being limited to fifteen.

4. The instructor to be an officer of the Medical Staff, nominated by the Deputy Surgeon-General of the Circle, and assisted in this duty by one of the medical subordinates attached to the Station Hospital, and a steady non-

commissioned officer to be detailed by the military authorities.

5. At the termination of the course an examination should be held, and certificates of proficiency given to those members of the class who have been regular in their attendance, and whose knowledge of the subject is satisfactory.

6. The appliances, instruments, etc., necessary for carrying out the instruction being available in every Station Hospital, the proposal need entail no expense to the State. It will, however, be necessary that two full sized diagrams, (1) the skeleton showing the ligaments, and (2) the heart, blood-vessels, and muscles, be provided.

**Nursing Orderlies.**—The Commander-in-Chief has had under consideration the question of providing a trained establishment of ward servants for employment as nursing orderlies in hospitals of native troops and followers.

2. Having in view the importance of raising the efficiency of the class of ward servants, and of providing a reserve for war purposes, the Government of India has sanctioned the enlistment of two ward servants per regiment of native cavalry, as dismounted sowars, and per battalion of native infantry, as sepoy, to be included in the present fixed establishment of corps.

These men are to be enlisted for "general service" in war time, though in peace they will not be liable to transfer. They will be granted all the privileges of the soldier as regards good-conduct pay, furlough and pension, but will never rise above the rank of "Sowar" or "Sepoy."

3. As regards the existing establishment of ward servants, such ward servants as are fully competent may be retained, and if they are willing to accept general service, they should be enlisted under the conditions specified in para. 2. If not enlisted, they will continue to serve on their present conditions, and in those regiments only one soldier ward servant will be entertained.—*Indian Medical Gazette*, November, 1888.

**TO EXTERMINATE GROUND SQUIRRELS.**—John S. Dillman and William B. Kyle, Moscow, Idaho Ter., have invented a fumigator which is a device for forcing poisonous fumes or gases into holes in the earth to destroy gophers, rabbits, or other burrowing animals, being an exterminator consisting of an air and smoke pump, and a fire box arranged for easy connection, so as to be readily operated with straw or wood and sulphur.—*Scientific American*.

**THE YELLOW FEVER ON THE YANTIC.**—The Surgeon-General of the Marine-Hospital Service has received the following letter from the Health Officer of the Port of New York:

HEALTH OFFICER'S DEPARTMENT, State of New York.  
QUARANTINE, S. I., January 16, 1889.

The U. S. S. Yantic arrived at Quarantine at 10.30 P.M. of the 10th inst., from Port au Prince, Hayti.

According to the report of Surgeon McCarty, yellow fever developed on board the Yantic the 28th of December, while lying at Port au Prince. Lieut. Charles R. Miles was the first victim. The 29th the second case, in the person of H. L. Kellar, developed. The third case, Cadet M. L. Bristol, occurred on the 30th, and on the 31st ult. Corporal Chas. Wm. Rowe was taken sick, and died on the 7th inst.

January 1st the vessel left Port au Prince. On arrival at quarantine the first three cases that had developed were still sick. The second and third cases in the order of the date of development were doing well. The first case was critically ill and gradually sank until death ensued at 10 P.M. of the 14th inst. The two remaining cases are convalescent.

The Yantic has been undergoing a thorough system of disinfection in every part not occupied by the sick. The case of Lieut. Miles who died on the 14th was so serious

• 1 One per regiment.

that I did not think it proper to expose him to the peril of removal to the yellow fever hospital. The course of disinfection will be continued until there is no danger of infection from anything on board of the vessel.

The case of Lieut. Miles was unusually protracted. There were complaints in his case that resisted all efforts of control—hemorrhage from the kidneys constituted the most serious of these.

A careful study of the history of the development of yellow fever on the Boston and Yantic leads to the conclusion that the source of the infection in each instance was in the boats of the natives, known as "bumboats," in which fruit was brought alongside the steamers. My reason for this conclusion will be fully given in my report soon to be made.

Very respectfully,

WM. M. SMITH, Health Officer.

**THE DANGER IN MEDICAL ABBREVIATIONS.**—We doubt whether many practitioners of medicine who are accustomed to write prescriptions daily, realize the danger their patients run through abbreviated formulas. Some physicians affect an extreme brevity, as if it intimated their superior familiarity with the materia medica. One of the best we ever knew always wrote out fully the names of the drugs in a clear hand and took time to do it. How many sick persons have been poisoned by excusable mistakes on the part of druggists in deciphering prescriptions it would be difficult to say, and the many jokes said to have been practiced on drug clerks whereby a meaningless scrawl was translated into a bottle of some compound, have a basis in fact.

From an exchange the following list is taken, which shows how some common modes of abbreviating may be interpreted to mean severally from two to five different things, some poisonous:

Acid. Hydroc.	{ May mean Acidum Hydrochloricum, or Acidum Hydrocyanicum.
Aconit.	{ Aconitine. Aconiti Radix. Aconiti Folia.
Ammon.	{ Ammonia [alkali]. Ammoniac [gum-resin].
Aq. Chlor.	{ Aqua Chlori. Aqua Chloroformi.
Aq. Fontis.	{ May often be read Aqua Fortis.
Calc. Chlor.	{ Chloride of Calcium. Chlorinated Lime.
Chlor.	{ Chlorine. Chloroform. Chloral.
Emp. Lyt.	{ Emp. Lytharg. [lead plaster, old name]. Emp. Lyttae [blistering plaster].
Ext. Col.	{ Extractum Colchici. Extractum Colicynthis.
Hyd. Chlor.	{ Calomel. Corrosive Sublimate. Chloral Hydrate. Hydrargyrum [mercury]. Hydras [hydrate].
Hydr.	{ Hydrochloras [hydrochlorate]. Hydrocyanas [hydrocyanate]. Hydriodas [hydriodate].
Mist. Ammon.	{ Ammonia Mixture. Mixture of Ammoniac [gum-resin].
Potass. Hyd.	{ Hydrate of Potash [caustic potassa]. Hydriodate of Potash [iodide of potas- sium].

—*Phrenological Journal*.

**THE MARINE HOSPITAL SERVICE.**—The bill reorganizing the Marine Hospital Service has become a law. The essential feature of this new law is that appointments to the service are made by the President and confirmed by the Senate. The service is now, therefore, upon the same

non-political footing as that of the Army and Navy. Changes in politics can no longer endanger the position or prospects of advancement of its members. In accordance with the law, the President has sent to the Senate a list of names of all the present members of the service for appointment as Surgeons, Assistant Surgeons, and Passed Assistant Surgeons, respectively. Dr. Hamilton has crowned his labors for the promotion of the service in a way which must be most gratifying as it is creditable to him.—*Medical Record*.

**SOME ADVANTAGES OF MEMBERSHIP IN MEDICAL SOCIETIES.**—There is, perhaps, no other one thing that conduces so much to the advancement of medical science as does the active, working medical society. Now and then we hear it said, "The profession is going wild over medical societies; they are getting to be entirely too numerous." Those who hold this view lose sight of the fact that compulsory attendance upon society meetings is a thing unknown. Every one will admit that it is possible for a physician to devote so much time and attention to society work as to seriously affect his private practice, but a smaller number of patients are lost in this way than by the stay-at-home plan.

The *Maryland Medical Journal* says: "By the thoughtful, live physician, the question, 'does it pay to belong to a medical society?' will always be answered in the affirmative." This, however, is not apparent to many, as the remuneration, in dollars and cents, comes in an indirect way. The *Journal* continues thus:

"The amount of practical information which a physician may gain from the discussions of an active society is beyond all calculation."

Nor does the medical society teach him less about himself. It gives him opportunity to compare himself with his fellows, to silently note the points in which he is deficient. It trains him to greater accuracy in the study of his cases, and greater care in their treatment, especially if, from time to time, he brings the more interesting ones among them to the notice of the society.

Here and there may be found an active, pushing city practitioner who is a member of no society, but this is a rare exception. Our best workers are society men.—*Weekly Medical Review*.

**DISAPPEARANCE OF YELLOW FEVER FROM TAMPA.**—The Board of Health issued in December last the following proclamation declaring the county free from yellow fever:

TAMPA, FLA., DECEMBER 20, 1888.

At the meeting of the Hillsborough County Board of Health held in this city yesterday the following resolutions were adopted:

WHEREAS, There have been no new cases of yellow fever in Tampa since the 3d instant, and the county and city being entirely free from yellow fever

*Resolved*, 1. That the Board of Health hereby officially declares the city of Tampa, and the county of Hillsborough, free from the presence of any and all infectious and contagious diseases; and that in our opinion no risk from yellow fever would be incurred by unacclimated persons visiting and residing in Tampa, or any place in the county.

*Resolved*, 2. That as there have only been ten deaths from yellow fever in the city of Tampa, during the summer and fall of 1888, it is very evident that Tampa has not suffered from any very extensive epidemic. Furthermore, in all houses where the disease has prevailed, so far as known to the Board of Health, all necessary measures to eradicate the poison have been taken; so that the Board of Health feels justified in declaring that no apprehension need be entertained on that account by people wishing to come to Tampa, and Hillsborough County.

JOHN P. WALL, M.D., President.

Attest:—D. POST, Secretary.

—*Weekly Abstract of Sanitary Reports*, Jan. 4, 1889.

## A CHRISTIAN SCIENCE FAD.—

"Think health and health will find you  
As certain as the day,  
And pain will lag behind you  
And lose you on the way."

Why not pursue this same line of reasoning to the bitter end, something after this fashion:

Think wealth and you will get it—  
A million, more or less;  
Think silk and in the closet  
You'll find a'gros grain dress.

Think land when you are drowning,  
Beyond all human reach,  
And by this happy theory  
You'll be washed up on the beach.

Think bread when you are hungry  
And a feast will there be spread;  
Think sleep when you are weary  
And you'll find yourself in bed.

—Harper's Magazine.

## PAMPHLETS RECEIVED.

Tilley, R., M.D., Chicago, Ill. *A Case of Atrophy of the Supercilia and Cilia, Associated with Atrophy of All the Finger-nails, of Congenital Origin.* Reprint from THE JOURNAL, January 12, 1889.

Knapp, Philip Coombs, A.M., M.D., Boston, Mass. *Some Post-Hemiplegic Disturbances of Motion in Children.* Reprint from the Boston Medical and Surgical Journal, November 22, 1888.

Knapp, Philip Coombs, M.D. *Nervous Affections following Injury.* Reprint from Boston Med. and Surg. Journal. 1888.

Clevenger, S. V., M.D. *Spinal Concussion.* Reprint from THE JOURNAL. 1889.

Sternberg, Geo. M., M.D., U. S. Army. *Recent Researches Relating to the Etiology of Yellow Fever.* Reprint from Trans. Assoc. Amer. Physicians. 1888.

Eastman, Joseph, M.D. *Intraligamentous Tubal Pregnancy.* Reprint from Am. Jour. of Obstet. and Dis. of Women and Children. 1888.

Mateer, Horace N., M.D., Ph.D. *Science in Medicine.* Graduating Thesis. Reprint from the Post-Graduate and Wooster Quarterly. Wooster, O. 1888.

Middlekamp, H. H., M.D. *Are Immediate Amputations Justifiable?* Reprint from Progress.

Stewart, Hon. W. H., U. S. Senator from Nevada. *Money Answereth All Things.* Reprint from Congressional Record. 1889.

Cutler, Ephraim, M.D., LL.D. *The Contras and Pros of the Cutler Stem Pessary.* Reprint from Albany Medical Annals. 1888.

Chicago College of Pharmacy, Twenty-seventh Announcement. 1889.

Jacobson, Nathan, M.D. *A Contribution to the Study of Tumors.* Reprint from THE JOURNAL. 1889.

## LETTERS RECEIVED.

John A. Larrabee, M.D., Louisville, Ky.; Electron Mfg. Co., New York; S. S. White Dental Mfg. Co., Philadelphia; Codman & Shurtleff, Boston, Mass.; J. H. Bates, New York; W. M. Barritt, M.D., Onarga, Ill.; Henry O. Marcy, M.D., Boston, Mass.; F. E. Yoakum, Greenville, Tex.; A. B. Younkman, Brenen, Ind.; A. G. Myers, New York; L. Duncan Bulkley, M.D., New York; Herbert E. Smith, M.D., New Haven, Conn.; C. W. Richardson, M.D., Washington, D. C.; Alex. Boggs, M.D., Paris; Owen Mead, M.D., Newmarket, England; H. Judd, M.D., Galesburg, Ill.; S. P. Deahofe, Potsdam, O.; Mary Hayden, Freeport, Ill.; M. Paul Gibier, N. Y. City; P. O.

Hooper, M.D., Little Rock, Ark.; S. C. McCormick, M.D., Duluth, Minn.; J. O. Stanton, M.D., Washington, D. C.; Ephraim Cutter, M.D., N. Y. City; H. A. Kimball, M.D., Chicago; B. Chapman, M.D., Copley, Ohio; Ira B. Read, M.D., New York City; Samuel L. Nelson, M.D., Boston, Mass.; John S. Coleman, M.D., Augusta, Ga.; Mr. G. E. Law, Brooklyn, N. Y.; Robert G. Ellegood, M.D., Concord, Del.; John Wilkinson, M.D., Oshawa, Ont.; O. J. Vincent, M.D., Allegheny City, Pa.; W. C. Brinkerhoff, M.D., Chicago, Ill.; Lloyd Brothers, Cincinnati, O.; A. G. Case, M.D., Denver, Col.; Mr. W. W. Brinton, Sharpsburg, Pa.; P. Blakiston, Son & Co., Philadelphia, Pa.; J. P. Fouch, M.D., Osage Mission, Kan.; C. L. Kinnaman, M.D., Cleveland, Ohio; Cranston & Co., Norwich, Conn.; H. Salzer, M.D., Baltimore, Md.; Chas. D. Pearson, M.D., Indianapolis, Ind.; Wm. B. DeWees, M.D., Salina, Kan.; G. D. Parker, M.D., McKinney, Texas; A. S. von Mansfelde, M.D., Ashland, Neb.; *The Cleveland Medical Gazette*, Cleveland, Ohio; A. J. Scott, A.M., M.D., Londonville, Ohio; Miss C. B. Leonard, New York, N. Y.; D. R. Armitage, M.D., Muncie, Ind.; W. W. Potter, M.D., Buffalo, N. Y.; Wm. Forster, M.D., South Oil City, Pa.; Frank Kenyon, M.D., Scipio, N. Y.; J. C. Hearne, M.D., Hannibal, Mo.; F. R. Reynolds, M.D., Menominee, Wis.; Ward Brothers, Jacksonville, Ill.; Fred Humbert, M.D., Alton, Ill.; H. R. Middelkamp, Warrenton, Mo.; J. M. Toner, M.D., Washington, D. C.; R. C. M. Page, M.D., N. Y.

*Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from January 12, 1889, to January 18, 1889.*

By direction of the President, and in accordance with Section 1246, Revised Statutes, an Army Retiring Board is appointed to meet in this city, at 11 o'clock A.M., Thursday, the 17th day of January, 1889, for the examination of such officers as may be ordered before it. Detail for the Board: Col. Jedediah H. Baxter, Chief Medical Purveyor, and Major Charles R. Greenleaf, Surgeon U. S. Army. Par. 2, S. O. 12, A. G. O., Washington, January 15, 1889.

Lieut.-Col. Charles H. Alden, Surgeon, and Capt. Edgar A. Mearns, Asst. Surgeon U. S. Army, detailed for duty on Army Retiring Board to meet at St. Paul, Minn., at the call of the President thereof. Par. 7, S. O. 10, A. G. O., Washington, January 12, 1889.

Capt. Richard W. Johnson, Asst. Surgeon U. S. Army, is granted leave of absence for fourteen days. Par. 1, S. O. 8, A. G. O., Washington, January 10, 1889.

By direction of the Secretary of War, Capt. James E. Pilcher, Asst. Surgeon, will repair from Ft. Wood, New York Harbor, to Philadelphia, Pa., at such time as his services can be spared, for the purpose of giving instruction to the Hospital Corps of the First Brigade National Guard of Pennsylvania. Par. 6, S. O. 8, A. G. O., Washington, January 10, 1889.

By direction of the Secretary of War, Capt. Benjamin Munday, Asst. Surgeon, is relieved from duty at Ft. Sisseton, Dak., and will report in person to the commanding officer, Ft. Sully, Dak., for duty at that post, Par. 2, S. O. 11, A. G. O., Washington, January 14, 1889.

First Lieut. Henry S. T. Harris, Asst. Surgeon U. S. Army, will, upon the arrival of Acting Asst. Surgeon Boyer, proceed from Camp Pena, Colorado, to the post of San Antonio, Texas, and report to the commanding officer for temporary duty. Par. 4, S. O. 1, Hdqrs. Dept. of Texas, San Antonio, Tex., January 2, 1889.

*Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending January 19, 1889.*

P. A. Surgeon A. H. Dickson, detached from the "Pensacola" and to the "Atlanta."

Asst. Surgeon F. W. Olcott, detached from the "Atlanta" and to the "Vermont."

# THE Journal of the American Medical Association.

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## ORIGINAL ARTICLES.

### MALARIA, AND THE CAUSATION OF FEVER IN THE STATE OF NEW YORK.

*Read in the Session on State Medicine at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, May, 1888.*

BY A. N. BELL, A.M., M.D.,  
OF BROOKLYN, N. Y.

It may be premised at the outset that, in this State, as throughout the United States, the most numerous of all diseases, after the communicable diseases common to childhood, are those attributable to malaria, but owing to the relatively low rate of mortality in this class of diseases, as a whole, in this latitude, and to the almost total neglect of morbidity statistics, it is impracticable to give even an approximate estimate of the number of cases. Moreover, as the cause of fever, though secondary in its etiological relations but primary in its importance, no conditions which give rise to disease of any kind have been so long recognized and continuously urged by the physicians of the State as preventable, as those which give rise to malaria and, consecutively, to malarial fevers. Notwithstanding, the same relative prevalence, and well-nigh the same generally recognized conditions which give rise to malaria continue to obtain now as they did at the beginning of scientific inquiry into the causes of disease in this State fully three-quarters of a century ago.

It would be a comparatively easy matter to make a volume of no mean dimensions out of the reports of committees and other contributions to the Transactions of the Medical Society of the State of New York from 1807 to the present time, containing material which would compare favorably with the best literature of the subject anywhere to be found. For example:

John R. B. Rodgers, M.D., President of Society in 1814 in his annual address of that year remarks, that intermittent and remittent fevers "arise from a change made in the qualities of the air, or the production of new materials in the atmosphere, arising from the application of long-continued heat on animal and vegetable matter in a state of decomposition." The "new materials" of Dr.

Rodgers are now called germs. And, as a description of the conditions which give rise to malaria, we know of nothing more perspicuous, more in accord with the present state of knowledge on the same subject, or more worthy of being proclaimed from the housetops than the following extract from the annual address of Alexander Coventry, M.D., President of the Society in 1824. He remarks:

"On my arrival in New York, in 1785, I found the whole space between the east side of Broadway and the river was vacant; it was a sandy soil with a gradual descent to the west, at whose foot the tide washed a sand and gravel beach; this shore, when fanned with the exhilarating westerly breeze which had swept the surface of the noble Hudson, might have been selected by Hygiea as her chosen abode. The citizens of New York at that time bore in their faces the bloom of health, and no signs of endemic disease were discernible in their looks.

"Ten years afterwards my business called me to the Capital, but the change I found in the looks of the citizens astonished me. Those living near the docks and wharves, indeed along most of the streets along the East River, had the pale, sallow look, the yellow skin and muddy eyes with which I had become familiar in the lake country during the preceding four years. The inhabitants bore the marks of endemic disease, and on inquiry I found that the disorder that raged in the city had been accompanied with the same symptoms as that which prevailed in the country. A most intimate friend then resided in the lower part of Pearl Street; he had lost a son and daughter and barely survived himself, while his eldest daughter who had nursed her relations had escaped the fever.

"Although there was neither swamp nor marsh, yet sources of disease were not wanting where vessels formerly lay. I found spacious streets and elegant houses, slips and basins filled up, and many acres gained from the sea and converted, as I was informed, not into dry land, but a mass of putrefiable stuff with which the most noxious swamp in Genesee could not compare. The North River side, where encroachment had not commenced still remained healthy and proved a safe retreat for the afflicted citizens.

<sup>1</sup> Transactions of the Medical Society of the State of New York, 1807-1834, p. 61.

"In the Spring of 1820 I was again in the city, and witnessed the improvements going on on the West side, the consequences of which became visible in 1822. Had the bank of the North River been left as it was originally the tide would have removed all the filth brought down the cross streets and all the sugar boxes ever brought from Havana would never have infected a spot large enough for a mosquito to alight on.

"In the country it often requires years, sometimes ages to conquer the source of disease, for vegetation annually supplies the pabulum. In cities, provided their location be favorable, it is man who works his own destruction, first by his improvidence, next by his negligence.

"The records of medicine abound with the most indubitable facts of the dreadful effects arising from the decomposition of animal substance. The wise Romans preserved the ashes of their ancestors in beautiful urns, and perhaps this was a mode preferable to resigning their remains as a prey to the worm and a poison to the living. The delicate Hindoo ascends the funeral pyre of her husband. Custom is everything. The Chinese find the most valuable manure in what with us is a great nuisance. The formation of poudrette, as practiced in France, would fertilize our fields and be a valuable relief to the inhabitants of cities. Pure and good water from a distance would be a grand desideratum. The filterings used in the city are extremely offensive, especially to the stomach of a stranger. One ounce of prevention is better than a pound of cure. Probably before the commencement of another century the Island of Manhattan will be thickly covered with human inhabitants. He whose patriotic endeavors would ensure health to such a number of fellow creatures would be more worthy of a monument than the proudest hero of the age, aye, if we may believe the Roman orator, he would approach nearer the divine nature, *Homines enim ad Deos, nulla re, propius accedunt, quam Salutem hominibus dando.*"

Such observations have not been improved upon during the sixty-four years that have intervened, but all along during the period the medical topography of the State and the conditions of endemic fevers have been among the most constant subjects of investigation and report by the members of the State Medical Society, yet never more completely than twenty-eight years ago, by the late Joseph M. Smith, M.D., in his "Report on the Medical Topography and Epidemics of the State of New York," to the American Medical Association. (Vol. 13, pp. 83-269.)

On the organization of the State Board of Health, in 1880, "Malaria and Preventive Measures against it," was one of the first subjects to engage the attention of the then Secretary, the late Elisha Harris, M.D., who remarks in his first report :

"The reports and various complaints concerning malaria and the local sources of miasmatic diseases outnumber all others received at the office of this Board. The local conditions which are accused as the immediate causes of the evils thus complained of may be summed up as consisting of undrained wet grounds, stagnant pools and partially dried swamps and ponds and unsewered or badly sewerred premises. The most obvious fact is that drainage and sewerage for health do not yet appear to be the first object which local authorities have in view in this class of public works, and the rules and regulations they enforce concerning them. This is true alike in cities, villages and the rural districts." (P. 20). In his third annual report, (1883, p. 40) he remarks :

"The localities of paludal malaria, and the extent to which miasmatic diseases prevail cannot be ascertained from the records of death, but from reports of sickness; yet the total mortality from the miasmatic fevers and other kinds of disease from the same class of causes is considerable. The special sources of these diseases abound in the large cities as well as in the regions of drying swamps and stagnant ponds, or undrained basins and water-soaked grounds. The local suffering from malaria is often found to exceed even that which, from other causes, is attended by great mortality. In some instances the increase and persistence of malaria breaks down the health of many families, discourages enterprise, and drives the thrifty classes and their business to more healthful localities."

The foregoing quotations are made, not because they contain anything new, but because the truths which they express continue to be the most important subjects which sanitarians and health authorities can urge upon the civic authorities for the prevention of disease. During the last four or five years considerable headway has been made in the State, under the auspices of the State Board of Health, in arousing the attention of local authorities to the importance of sanitary economy, and there is reasonable ground for hope for continued and increasing progress in this direction

"Just what groups of signs and symptoms are accepted as evidence of the influence of malaria," it is somewhat difficult to define, but, in general terms: most fevers caused by malaria are in their types intermitting, or paroxysmal, and remitting or exacerbating, and hence are properly designated *periodical*. But the exceptions to this definition are by no means rare.

From somewhat extensive observation in regions exceptionally prolific in periodical fevers, I have sufficiently often witnessed the prevalence of *endemic pneumonia* of a peculiarly acute and fatal type to satisfy me of its malarial dependence. Such cases are usually ushered in with a severe chill, intense headache, delirium, rapid pulse, high



temperature, overwhelming pulmonary engorgement and fatal termination within four days—and sometimes within forty-eight hours—without any remission. Moreover, I have observed cases of approximately similar character in relation with domiciliary conditions and localities, especially foul cellars and cellars exposed to gaseous emanations from foul soil surroundings, insomuch as to be fully satisfied in my own mind that a very large percentage of the numerous deaths from pneumonia in the winter time, among children and other persons mostly confined to indoors, in the colder regions of the United States—in the country as well as in cities—is due to malaria and preventable by sanitary measures.

Other exceptions are found in persistent chronic congestions of the liver and spleen, resulting in dropsies, and congestion of the spinal meninges, giving rise to the persistent pains, aches and neuralgias common to the inhabitants of most malarial regions and domiciliary abodes, such as those indicated, and more or less proportional with the extent of the conditions.

*Dengue*, too, may be mentioned as a generally recognized distinct type of malarial fever, with exceptional symptoms, mostly limited to regions where the conditions which give rise to malaria exist in greatest intensity.

With regard to your final propositions—"What is malaria" and "what evidence is there for or against a malarial germ?" The correct reply is yet to be discovered.

The practical conclusions deducible from the foregoing summary are:

1. Malaria is coincident with accumulations of organic matter in process of putrefaction in alluvial bottoms, on the margins of sluggish streams, low humid borders of stagnant ponds and lakes, the marshy borders of the sea-shore, and *circumscribed local conditions*, chiefly artificial, comprehending more or less the same relations to vegetable debris and other organic matter in process of decay as the outlying conditions mentioned in this connection.

2. While it is not possible in the present state of our knowledge to determine the special relations existing between malarial diseases and the geological, thermal, hygrometrical and barometrical conditions under which they occur, those thermal and hygrometrical conditions most promotive of putrefaction coincident with the absence of sunlight are in the highest degree promotive of malarial poison.

MEDICAL gentlemen desiring to become members of the Association, can do so by securing the endorsement of the President and Secretary of the local society to which they belong, and enclosing the application with the membership fee (\$5), to the Treasurer, Dr. Dunglison, lock box 1274, Philadelphia, Pa.

## SOME RESULTS OF EXCESSIVE CONSERVATISM IN THE TREATMENT OF DISEASE IN LARGE JOINTS.

Read before the Philadelphia County Medical Society, Oct. 24, 1888.

BY ADDINELL HEWSON, A.M., M.D.,  
OF PHILADELPHIA.

The very admirable "Contribution to the Study of Excisions of the Large Joints" read by Dr. John Ashhurst, Jr., on the first day of the recent meeting of the American Surgical Association in Washington, D. C., and the interesting discussion of its various points, participated in by the many distinguished members of the profession, including the great men who were present from abroad, have given fresh zest and interest to the whole subject. In his paper Dr. Ashhurst confined himself, "particularly to the operative method, the after-treatment, and the functional value and limitation of applicability of excision in the case of each articulation." Drs. Lewis A. Sayre, of New York, R. A. Kinlock, of Charleston, S. C., T. F. Prewitt, of St. Louis, Mo., F. S. Dennis, of New York, Frederick Lange, of New York, John E. Owens, of Chicago, and Sir William MacCormac, of London, are mentioned as taking an active part in its discussion.

Neither the author nor any of these gentlemen referred to the proper times or indications for resorting to such operative procedures. It is true, Dr. Ashhurst did say that in "his excisions of hip-joints at the Children's Hospital, Phila., the rule is not to operate except in otherwise hopeless cases," and Sir Wm. MacCormac said he had heard with some surprise that "the tendency here seemed to be to postpone excision of hip-joints until all other measures had failed," and that, "in England the disposition is to perform the operation at an earlier period." So, also, Dr. Lange, of New York, referred to a class of cases in which the disease began in the tissue outside of the joint, the articulation becoming involved at a later stage of the affection. In these cases he recommended "early operation with the hope that in this way necessity for opening the joint would be avoided." But it is much to be regretted that we did not get more definite information all around on the point.

The most recent surgical writers on the subject to whom we can refer as well posted authorities at the present time, would all seem to agree that operative procedures of the character of excisions are not to be resorted to until there are evidences of absolutely destructive disease, going on in the joint properly speaking, such as of the synovial membrane indicated by roughness and impaired motion associated with severe pain there, aggravated by efforts to produce such, or by succussion

\* These quotations are all from the proceedings at Washington, D. C., published in "The Journal of the American Medical Association" for Sept. 29, 1888, Chicago.



in the joint by jarring on the remote extremity of the limb, and, where there are much distension and signs more or less positive of suppuration in the cavity; also, where there are fistulæ in communication with that cavity associated with exhausting discharges of offensive fluids and particles of dead bone, and the detection, by probe, of bare bony surfaces belonging to the joint proper and so shown to be more or less definite and extensive in their nature. These are, however, no more positive or distinct in their limit, than what have been implied by the author and those who discussed his essay. We may, indeed, fairly inquire whether further conservatism as to this subject is not what is going to prove by its results the greatest skill and science in our noble calling.

A vast majority of the successful excisions of the large joints, require considerable time for the completion or perfection of their cures, and some cases have to go, as Dr. Ashhurst states, through a repetition of the operation, and, then with greater danger to life, before the desired end is attained. Even with the best results from excisions of joints, the limb as left, is not what could be wished for, and is certainly a constant source of lamentation to a laborer, whether a man, a woman, or a child; either in high, or, in low life, who carries it.

With these thoughts in my mind, I am tempted to show here this evening some of my efforts at greater conservatism than is encouraged by any authority, feeling assured that the thorough exhibition of them will do more than words to prove their advantages. To make this exhibition as thorough as possible, I shall, for the want of time, limit it to that of only three cases—one of the hip, one of the elbow, and one of the wrist. They are all at present within my reach to show you, and are to be taken as representative cases of the results I have been having in my treatment—now for nearly twenty years—and which has been with earth dressings as the essential part.

In all my cases I have never refrained from employing anything that would seem to meet any indication in each instance as that of a sedative, tonic, stimulant or eutropic. Thus these three cases belong to a group in which I have made other topical applications as direct as possible to the seat of the disease at the times when I was about to renew the earth dressings, and which applications I expected would be of service in aiding the dissipation or action to be caused by the earth. In them I made application of the gases generated by "Bergeon's apparatus for treatment of Phthisis," directly to the parts, however, by means of inverted funnels or rubber bags which could be made to hold the gases on the localities desired. The funnels being used only at the shoulders and hips, and the bags with two large orifices like elastic knee-caps, for the elbows

and knees, and those with one opening, ordinarily to be found in the rubber stores, large enough to be drawn up over the extremity and some distance above the diseased part, for the wrist and the ankle. These rubber bags are all quickly filled by the distributing tube of Bergeon's apparatus inserted under their orifice, and when well distended the tube should be withdrawn and the gas left in contact with the part for fifteen or twenty minutes each time. The inverted funnels on the hip and shoulder do not answer the purpose so well, nevertheless, the gases can be made to penetrate the parts through them as can be demonstrated by the application of strips of test paper (saturated with acetate of lead) on the face, nose, armpit or inside of thigh, whilst such gases as carbonic acid, and sulphureted hydrogen are being forced through them on to the integuments, making the application of the paper always at as remote a point as possible from where the funnel is being pressed, so that the demonstration of the chemical change in the paper will be more apparent. The resort to this use of the dissipating and disintegrating powers of gases, was first suggested to my mind by the demonstrations of Bergeon's uses of them in phthisis, made by our esteemed president, Prof. J. Solis-Cohen, at the German Hospital in the Spring of 1887.

*Case 1.—Disease of hip-joint  $1\frac{1}{2}$  inches shortening; cure complete without any shortening, deformity or lameness.*

On the 29th of June, 1886, when visiting Mrs. — for rheumatism, I noticed her grandson, aged about nine years, come cautiously into her room with a decided hitch in his gait, evidently walking on the toes of his left foot, and on asking what was the matter, got the answer: "Oh! nothing but a bruise on his thigh whilst romping with some of his playmates in the neighborhood." "Well then," said I to his mother, "You had better put on him some of the earth" (which his grandmother was using with much satisfaction). I saw nothing more of the boy, but some days afterwards, was told the clay had done him good.

A month later his mother called at my office and said that Harry was still very lame, and they feared something serious was the matter and would like me to call the next day and examine him. This I did, and found him with all the characteristics of hip-disease in its earliest stage, fullness of buttock, flexion of thigh with pain in the front, inversion of foot and disposition to keep the latter in a position so as to prevent any of his weight being brought to bear on the heel. I ordered his mother to have Mr. Gemrig make one of his Thompson hip-joint machines, long crutches, and a three-inch-high sole shoe for the other foot, and while they were being made, he was to keep in bed with that knee supported on a rolled-up pillow. The earth was to be constantly worn by him around about the hip-joint

as well as on the front of the thigh. He was to have full diet. The boy's age and temperament were very much against his maintaining the rest so ordered. His mother did, however, succeed in keeping the clay constantly on him, and when she saw him on the morning of August 4, 1886, he told her, he had not a particle of pain anywhere about his thigh as heretofore, that it had all gone in the night. But, when she went to renew the clay she found a big lump on that buttock the size of an egg, which was very tender when pressed on. This alarmed her and I was summoned.

On reaching the patient I soon found the head of the os femoris was out of its socket and on the dorsum ilei, and I insisted on the fact that he must have had some other accident than what I had first been led to suppose, I also declared he had not been keeping himself so quiet as I had directed he should. Then I made careful measurements which showed this limb to be actually one and a-half inch shorter than the other. These measurements were made from the umbilicus and the anterior superior spinous processes of the ilei to the tuberosities on the inner condyles of the femur, as also to the internal malleoli. Then, not yet having the apparatus, I applied a thicker (half an inch) layer of the clay over the joint by means of scutetus strips in the groin and on the buttock above the head of the os femoris, so that when dry they would serve to prevent its riding up as much as possible; I also secured greater flexion than before of the knee by binding it on a much heavier pillow.

On my visit the next day I was told it had been ascertained that the boy's injury had been from jumping off the roof of an old abandoned privy-house which was about ten feet high, while playing with his companions the day he first experienced his pain. His fall upon his feet then occasioned him severe pain up through the left thigh, which afterwards became fixed on the front and about the middle of that part. The report of his condition was much more satisfactory than had been anticipated, on this morning. He had rested better, had made no efforts to get out of bed during the night, evidently from having been carefully watched. From then up to the 18th of August (when he received the apparatus), he continued to do well. On that day I put it on, myself, still continuing the applications of clay as before. I ordered a continuance of the clay dressings night and day, never to put the lame foot to the floor, but always using the crutches to get out of bed; also giving permission to leave off the apparatus while in bed.

These instructions however, he did not follow, and finding this to be so at the end of a week, as a matter of discipline I ordered that he should be kept constantly in bed, with the complete dressing on, until the end of August, when he evi-

dently realized that I was determined to make him follow my orders, and submitted. I was glad of this for I was anxious to have him getting about; for two reasons, one, the very hot, close weather, and another, his total freedom from either pain or tenderness by pressure directly in the buttock, both good reasons why he should be out of doors as constantly as possible. The buttock of the lame side was then fuller and firmer than that of the other side, and succussion through its heel several times in rapid succession developed some tenderness in the joint. I then made more traction on this joint through the apparatus than I had been doing before, and finding that such could be done steadily without occasioning any distress, I kept it up until the end of October, when there was no shortening to be detected by me. I then gave him more freedom in going about, without however, making any change in his topical appliance; on the contrary I directed that he should be closely watched to prevent his presuming on his progress. I also then put him on emulsions of cod-liver oil and hypophosphites to prepare him for the near approach of our winter weather. They had a very happy effect, and were continued through the season and until the spring of 1887.

At the beginning of that year, actually on the morning of Sunday, January 2, 1887, knowing that I should find all his folks at home I stopped there to advise with them as to when we were to let him go about without the apparatus. He had then been wearing it constantly for four months and had been two months without a trace of shortening in the limb. He was very impatient to get rid of all his impediments to full and free locomotion. His general condition was admirable, he looked the picture of health, and finding no trace of any trouble about his hip, either as to the condition of its capsule or the relation of its trochanters to the ischium-pubes or coccyx, I then gave him freedom to walk without anything about the joint. He did so, but with a good deal of hesitation, being at first afraid to put his foot upon the floor, then, to bear any weight upon it, and seemed quite glad when I gave him back his crutches. I directed his folks to encourage him all they could after I left, to walk, and his mother to reapply the clay every night at bed-time, and to take it off in the morning when he got up, so that he could use the joint freely through the day. The next day, however, he was on his crutches and went to school with them.

I found he did not make much progress in getting about with all the liberty given him to use the limb. Indeed he limped in a marked manner at the end of the next two months, and a thorough examination developing nothing wrong beyond a want of full tone in the muscles of that limb, I then, in February, began localized electricity both in its primary and induced currents,

to all the parts; which improved them so much that by the end of June there was no appreciable difference between the two limbs; and yet he would at times limp as badly as during the first month after laying aside all its supports. I then used the gases over the joint, by means of the funnel apparatus, with the effect of quickly developing more freedom of motion, and, what I made a memorandum of at the time, of sleeping with the limb flexed and drawn up as he had been in the habit of doing with the other all along. The proper season coming around, his mother took him for a short period to the sea-shore and indulged him in as much bathing as he desired there. When they came back he had still a hitch in his gait, but frequent examinations showed no cause for it other than a nervous habit, and I directed that no further concern should be shown about it. He went to school constantly through the winter (1887-88) and late this spring he went away on a visit into the country in Ohio, where he staid until this autumn, running about constantly barefooted with a companion who was in the habit of doing the same; the effect of which was to cause him to forget all his old ways and to make him free of every peculiarity in his gait.

As can be seen by his photograph taken on the 13th day of this month and also by his own presence, he is now entirely free of any trace of hip-disease or lameness.

*Remarks.*—The treatment of this case has been of the most satisfactory character. During the whole time, *i. e.*, over two years since it began, it required but little over three weeks detention in bed, and that would not have been necessary if the apparatus had been ready and the patient submissive. On the authority of Mr. Gemrig, the instrument maker, who has had an experience of over forty years in such matters, a cure like it is never seen. He says: "The apparatus is always worn as long as in this case, and where there has been any shortening previously, the patient when cured, has always had to wear some thickness of heel at least on that foot to walk perfectly."

*Case 2.—Diseases of Wrist-Joint—Suppuration—Two Fistulae.*—Loss of power in all joints connected with it. Treatment now for over six weeks with dissipation of diseased action, and partial recovery of function.

Owen J. S., *æt.* 23 years, was injured in July, 1885, whilst working at Plymouth Rolling Mills, Conshohocken. He was at that time taking part in the annealing of a sheet of black-hot iron, and losing his balance, fell forwards, coming with all his weight on said hot sheet, striking it with the palmar surface of his left hand, so extended as to receive the chief part of the force on the integuments directly over the trapezium and unciform bones there. The burn was a deep one; dressed immediately by his companions with white lead

and benzine, and he resumed his work as such men are in the habit of doing, not taking much account of the accident. He was, indeed, steadily at his work till the end of the year without seeking any medical advice, although the burnt surface had never become firmly healed in that time.

In the following February, when work was slack, and he was experiencing constant suffering in the part, he sought the advice of the physician of that vicinity, who ordered him a salve which he continued, as faithfully as is the habit of iron-workers, during nine months. In which time the doctor had several times to open abscesses which generally pointed close over the trapezium; once he had to run four of such openings into one. The most profuse abscess, however, was along side the flexor tendon of the ring finger. It discharged steadily for five months after its first opening. During all this period, he was constantly at work, suffering at night from pain so that he had often to take morphia for its relief. During Easter this year (1888), he got frolicking with some companions, and struck one in the mouth with the back of this hand. Since then it has been much swollen and the seat of much pain.

A month later, after severe rigors and with no abatement of pain in the wrist, he had a number of abscesses (4) gather and break in the arm-pit of that (left) side. These were discharging freely when he first came to me (September 17). He was then much emaciated, looking very distressed, and was holding the wrist in position of extreme pronation, with great care by the other hand. His left fingers were all extended and immovable at their metacarpal joints, the dorsum of the carpus was elevated more than half an inch above its normal position, very pale, somewhat bluish in tint, and so tender that he could not tolerate any pressure or manipulation there. The swelling and width of the joint were such that the whereabouts of the styloid of the ulna on its side, and that of the radius on its side, could not be determined. The palm of the hand was so much swollen up to the digital joints that I could not see where the openings from the abscesses had been. There were so much discoloration and boggiess under the abductor of the thumb as to impress me with the idea that there was deep-seated suppuration thereabouts, but I did not examine it critically either by manipulation or needle exploration, for I wished he should get the full benefit of twenty-four hours wearing of the clay before making such an examination. I therefore proceeded to apply the clay in the form of a paste all over the parts from midway of the fore-arm down to the extremities of all the fingers, and of a thickness of at least half an inch everywhere, surrounding it with a film of cotton wadding. I then applied a roller bandage

for its further retension, and put the fore-arm and hand in a sling. This was all done without occasioning any pain, and I sent him home to return next day.

He came the next afternoon looking well pleased, and said that he had had a good night's rest, but since day-break had been quite annoyed by the traction of the hairs on the parts covered by the clay. This I quickly showed him was the best evidence of improvement in his condition, that it was the result of marked shrinkage, especially on the back of the hand and fore-arm, after the dressing had become well set and dried so as to hold on to the hairs there. I indeed had to cut the clay free from those hairs by large scissors, and in doing so, showed with them beneath the set clay how much the integuments had shriveled away from it. After the dressing was so removed, I adjusted a gas bag up over the parts as far as the said dressing had been. This required some time and great caution to avoid exciting pain. When it was accomplished he bore it without complaint and was pleased with its distension, for it occasioned decided relief all the time it was so left on, a period of twenty minutes, when, as I allowed the gasses to escape and drew the bag off, I showed him how water had been formed by them to such an extent as to flow freely off the parts, and he was then able to show me the cicatrices of the openings, formerly in the palm, and which I could not (as stated) see the day previous. I renewed the application of the clay paste, fixing it this time by a layer of tarlatan, and when I got it on I slowly raised his elbow to the level of his shoulder with my right hand, whilst I maintained his hand and fingers apparently in their original position of extreme pronation with my left, elevating it however, as I did my right. I then set the hand, wrist and fore-arm in this new position, midway between pronation and supination, on a Bond's splint (for fracture of the lower end of the radius) and fixed them in it by some wadding and a roller bandage.

This dressing, as so perfected, was renewed every day after the application of the gases for about the same length of time on each occasion, to the end of two weeks, that is, until the 21st of September, when the shrinkage ceased to be so much, and the dressing could remain fairly in place for two days at a time.

During those two weeks the relief experienced by the patient was very constant, and such in the first four days as to allow him to work in the mill with the right hand every day, and at the end of that period he could flex all his fingers but the ring finger, when he had the gases on, and could endure my manipulation of them without complaint. After the tenth day the styloid of the ulna was readily to be seen, and the point of tenderness manifested only between it and its side of the radius. All appearances of suppura-

tion or distension in the palm had then gone, and the patient could produce some movements in the extensor tendons of the fingers.

At the end of the third week of my treatment, the tumefaction had disappeared so completely from the dorsum that any one could readily perceive the motion in those tendons of the extensors as he essayed to make them. This was in the latter part of September just past, when everyone here can remember we scarcely ever had a day without rain of a severe character. Like a true rheumatic, he always before those storms experienced pains throughout his system, and especially in his lame limb. I gave him some salol (gr. x doses) to meet those symptoms, and it speedily relieved him.

The local treatment was continued the same for the first ten days of this month (Oct.), being renewed every other day. After that time it was only disturbed twice in the week and on each of those occasions; localized galvanism was passed through all the muscles of the fore-arm, during twenty minutes each time.

The use of the Bond's splint was abandoned on the 16th of this month, eight days ago, and the patient has developed through exercise, considerable power in the parts. I have also during that time given him three applications of galvanism, evidently with benefit.

His photograph was taken the day of his leaving off the splint.

*Case 3.—Disease of Elbow-Joint—Suppuration—Seven Fistulae, Necrosis, and Rigid Ankylosis—Cured with Recovery of the Functions of the Joint.*

George R. C., married, æt. 33 years, shoemaker by trade, has been living in S. Camden (Kaighns Av.) for sixteen years. Had two years previous to going there, (eighteen years ago), his right eye destroyed by some lime thrown into it. His health was afterwards good until the early part of March, 1885, when he was taken down with typhoid fever, with which he was ill for nine weeks. He then got about, but soon had a relapse—as it was pronounced—with no trouble in the bowels, but great distress in his breathing, cough and abundant expectoration, the latter symptoms persisting for a full year, associated with general breaking down, so that he was not able to follow his trade during the winter of 1885-86.

In January, 1886, he was seized with pain in his right elbow at its inside, on rising one morning, without any assignable reason, and he supposed from its nature, that he had been sleeping upon it. This pain grew worse, and became so distressing as to prevent his getting any rest for a long time. His family physician saw him on that day, ordered the joint to be painted with tincture of iodine, but not to be restrained in any way. His distress grew worse steadily, and at the end of four months, he sought the advice of

another doctor, who treated the joint by a succession of fly-blisters and poultices, with sedatives and internal remedies for two months, without any abatement of his sufferings. Then, after six months' suffering altogether, he placed himself under the care of another physician, whose directions, he says, he followed faithfully for four months, without any benefit. During the whole treatment of ten months no one had ever put the joint to rest on a splint, or even directed him to keep himself at home. The man was evidently disposed, from his own confession, to be negligent about himself. The last of those who treated him explored the joint by a needle, and decided his case to be, as the patient says, "dropsticuli." Shortly after this the patient had some severe chills, irregular as to time of occurrence, but constantly associated with sweats. These were especially at night, in the beginning of January, 1887, and on the 25th of that month, he first called on me in Philadelphia and gave me this sketch of his case.

His carriage and all expressions gave him the appearance of long suffering and much emaciation, which was aggravated by the condition of his right eye, making him represent very well a case of extreme blood poisoning, such as one sees at an eye-clinic, now and then. He came to me recommended by an old patient of mine, and looked as if he had been some time making up his mind to do so. The whole of this (right upper) extremity, from the insertion of its deltoid down, was much swollen and rigid; the forearm and hand partially supinated, the elbow very distorted and extended, more than thrice its natural size, with many points around it clearly indicating by their elevations and discolorations, the presence in them of deep-seated suppuration, the largest one being down on the forearm at the outside and near the point of insertion of the pronator radii teres, a number on the inside, and one above the olecranon on the back of the arm where the exploration had been made by the last attendant he had had. He was evidently much afraid of my hurting him by a thorough examination, and suggested that I should give him a chance for one night's rest before subjecting him to any. This I agreed to, and proceeded to apply a full dressing of the earth all over, of the thickness of half an inch, covered by a split layer of cotton wadding, carefully retaining it by two full length rollers applied from the finger-ends up to the deltoid. This made a firm comfortable dressing for him with which he went away rejoicing, after being told not to take any anodyne to make him sleep, as he had often done by previous advice.

The next morning he reported himself early at my office, looking very different from what he had the day before. He said that after an hour's wear of the dressing, he had been free from pain,

had slept very soundly the night through, and when he woke up in the morning, the dressing was all off, but proceeded to assure me that it was no fault of his, as the whole thing had slid down and off his hand while he was asleep, which was in consequence of the shrinkage of the parts on which I had applied it. He had abstained from washing the limb so that any one could see by its color that the dressing had really become detached, and had itself fallen off.

In this condition I had his photograph taken at once, regretting that I had not anticipated such a change by that dressing, and deferred its application until I had secured my negative to represent the original state of the limb, which the picture I got was far from doing. The presence of the yellow clay in the form of a fine powder not only rendered the outline of the limb indistinct, but concealed in the field of the lens, all the points which I had recognized before any dressing was put on by me, as where suppuration was present beyond all doubt.

He could not this morning (Jan. 26) tolerate any effort on my part to determine whether the joints were ankylosed, and after the photograph was taken, I applied a dressing much in the manner of the first, but heavier and better secured. It retained its place, and was all intact when I examined it the next day, but was so loose from the shrinkage of the parts from what they were at the end of the first twenty-four hours, that I could easily pass my finger under it, and so not only detached it, but inspired him with more confidence that I would not hurt him handling it. I therefore dressed it again without any exploration. The extreme rigidity of the limb can be seen very well in the photograph.

The patient visited me every day for the rest of January and through February, with the exception of three days when the Delaware was so obstructed by ice as to prevent travel across it. These omissions fully convinced him of the necessity of the daily renewal of the dressing, and served to make him very constant in his coming. In that period of five weeks a great many changes occurred; thus, on the twelfth day the depot of pus and sloughing tissue on the forearm close to the insertion of the pronator radii teres, the scar from which can well be seen at present, was ready for opening without going deep into the parts. Its discharge was fetid for some time afterwards when I took the dressings off. Its evacuation brought out more prominently the enlargement of the elbow, and was followed by a discharge from the back of the joint where the acupuncture exploration had been made. The reduction following these enabled me to apply a jointed splint over the dressings (but perfectly straight) on the flexor surfaces of the limb. It made the dressings still more secure than they previously were. On one occasion I exhibited the case, at the

request of Prof. W. H. Pancoast, before his class at the Medico-Chirurgical College, and those of his colleagues here to-night who were present there can recall the desperate appearance this man then presented. There were five fistulous openings about the joint, through one of which, on the inner side, I passed a fine probe attached to a sounding-board, and when I got its point down to the inner condyle of the os humeri, all at the lecture were able to perceive the sound of bare bone which I elicited, and can recall the Professor's declarations that it would be absolutely miraculous if I made a cure in such a case.

Early in March, when all the points around the joint (seven in number) had been opened and discharged freely; he showed very well the benefit of cod-liver oil, iodide of potassium and salol which had been ordered for him, and which he had taken constantly from the time of my first having charge of him. Stopping the iodide when acne appeared on his face, and substituting the salol in its place until they were dissipated; then going to the iodide again as long as there was any thickening of bone, periosteum or ligamentous tissue.

By the middle of April, I had had some experience with topical applications of the gases in kindred cases, and arranged to apply them to him in addition to the clay as part of the treatment. I made the first application of this kind to him at my dressing on the 20th of that month. After the gases had been kept in contact with the parts all around for twenty minutes, and the bag was taken off, each one of the five fistulous orifices which were then open, was seen to be surrounded by a black ring of carbon, and the closest scrutiny could not detect any odor, either of pus or sulphuretted hydrogen about them, and yet a strip of acetate of lead test paper laid on his nose showed by its blackening the exhalation of sulphur there.

Three repetitions of the use of gases in the course of this week were followed in the next week by a thorough freeing of the parts of all odors, and a very noticeable dissipation of the discharges. This improvement continued so markedly that I did not find it necessary to change the dressings more than nine times during the next month (May) and twelve times in June. At the end of the latter he had become possessed of sufficient confidence to repeat the dressings when they became loosened, himself. The joint had then become, as I supposed, firmly ankylosed in its extended posture. I had, indeed, made no attempts heretofore to effect any change in it either by the screw, at the joint of the splint he had been wearing, or by massage and flexion, for fear such might prevent or even retard his cure. He was still in too precarious a condition to hazard any such.

In July he went to the seashore and pursued

the treatment there with decided benefit, but unfortunately he returned too soon, for coming home in a very hot spell of weather, he suffered much from the heat at nights in Camden, and was impelled once to leave his bed on the second floor-room and go to sleep on the floor of the piazza of the house. There he was seized in the night with a severe chill followed by fever and a return of suffering in the joint, which he had not had since the first dressing was applied to it by me on the 25th of January, and he had much sweating, with albumen in his urine. Within twenty-four hours afterwards several of the tracks of the sinuses at the elbow became distended, and then discharged showing beyond a doubt the that he had sustained a serious relapse.

The alarm and the disappointment as to what was to be the result of this, were, of course, very great to me, and I did not refrain from expressing them. I then felt compelled for the first time, to keep the earth wet on the parts for twenty-four hours by surrounding it, when so applied, by waxed paper as an air-tight envelope. This encouraged the widening of the sinuses and the free escape of discharge, and so produced a very happy effect, and the patient promptly reacted.

Then, for the next fifteen days, I renewed the drying earth dressings and the use of the gas applications every twenty-four hours, and at the end of that time I removed two small spiculae of exfoliated bone, mere scales, one from each of the fistulae over the inner condyle. After that occasion the three points which were then discharging, quickly closed, and I ceased the daily renewal of the earth and the use altogether of the gas applications. The patient was then so impressed that he came to me every other day through the rest of August and the whole of October and November, continuing the dressings the other days himself. By the end of that time, all the signs of suppuration and inflammation, even to that of abnormal heat of temperature, had disappeared about the joint, which was perfectly rigid. The atony of the muscles was very great, and at the beginning of December I ordered him to take compound phosphites and let me pass the galvanism through them daily.

This treatment with the consequent daily renewal of the earth dressing was continued until the first of this year. Then he came to me every other day, when I made efforts for a couple of weeks, by passive motion with him under the rapid breathing, but failed to accomplish anything extra. He failed himself to make the needed efforts in the breathing to produce any insensibility such as I have had often with patients before; I therefore gave up trying it with him, and directed him to let me dress every other day without intermediate changing on his part. This he did until the middle of March, when he took to dressing himself without my seeing him, for



the reason that he had got possession of the news-stand at the river ferry, which kept him constantly occupied. It was in consequence of this that I did not see him again until the evening of Saturday, June 16, when he was perfectly well, but with a limb, as he said, like a pump handle. I then applied a vapor of rhigoline 1 part and aq. menth. 2 parts, around the elbow for some fifteen minutes, and made some efforts at flexion. They resulted in some, very trifling, breaking away of adhesions, but I had to desist on account of the patient being conscious and making efforts to resist me. This attempt was so brief and limited as to merely encourage me for another which I promised myself to make with nitrous oxide gas when satisfied that this had occasioned no harm.

I made it on June 19, three days later, at Dr. Kimmell's office, 1306 Walnut street, where the doctor gave the gas and I broke up all the adhesions of the joint without much difficulty by flexion, extension, pronation and supination, the chief obstacle being at the inner condyle of the humerus, and it demonstrated only at the extreme of flexion, but not anything more than dense fibrous tissue would cause. He expressed himself as feeling tender around the joint when he recovered from the gas, but not as suffering pain. I reapplied the earth dressing immediately on the flexed splint and had him call on me the next day, when he was so free of all irritation that I told him to go on with dressing it himself every day, when he should try moving the joints each time.

At the beginning of the next week he called showing himself confident by the motions he could effect in all the joints that his recovery was to be complete. Since then I have not seen him more than half a dozen times, the last examination showing slight embarrassment of supination at the head of the radius and of extreme flexion at the inner condyle.

#### ADDENDA.

In the preparation of this paper for its original purpose, that of a communication to be discussed at a meeting of a medical society, and relating as it was intended to patients to be present there, much in regard to them had to be implied or left untold as then uncalled for. This was especially so as regards the details of the diagnosis of all of them; as was shown in the discussion which followed its reading.

In Case 1 it was stated that when I was first summoned to examine the lad I found "all the characteristics of hip-disease in its earliest stage," of course implying not only the absence of dislocation of the joint which does not belong to that stage of the disease, but that I had sought for its signs—had considered the relations between the trochanters, the ischia, and the pubes of both sides, and had failed to find any signs of such a dis-

placement. Then the statement made shortly afterwards, of how and when such dislocation did occur, also made it unnecessary for a declaration of its non-existence prior to that date, particularly as my efforts were evidently to be as concise as possible in my statements.

The testing for the penetration of the sulphuretted hydrogen into the system and its elimination by the skin was made in that case by the strips of bibulous paper charged with acetate of lead and applied across the right ala nasi. These pieces of paper then were browned in nine minutes after the gas was brought and kept by a funnel in contact with the skin of the hip.

Case 2 was brought forward for the special purpose of showing what progress was made at the end of six weeks of the treatment of disease of the wrist with him. He was then free of all pain, but could have some provoked about the joint by harsh handling and by attempts at passive motions of considerable degree there, by either forced flexion, extension, pronation or supination, or by heavy pressure or succussion on the radio-carpal joint. Yet limited motions and pressure of a voluntary character without exciting pains were shown to be possessed by the patient after, as well as before he was subjected to promiscuous examinations by many members of the Society present who wished to make them, and tested well his endurance. The pains so provoked ceased, however, with those latter testings.

The demonstrations of the sulphur passing into the system from the tegumentary surface of the diseased extremity when the gases were being applied on it by the gum bag, in this case, were made chiefly by the patient holding the test paper in the palm of the opposite hand. The discoloration was always there effected between seven and ten minutes after the gas was first passed into the bag.

The consequences of the relapse which occurred in Case 3 served to confirm the diagnosis of "disease in the elbow," as originally made by me. The distension of the sinuses then, and their being widened by maintaining the clay dressing constantly wet on the limb for twenty-four hours by covering it with waxed paper, gave me every facility for exploring inside of the joint. I then, by means of the long delicate probe attached to the sounding board, penetrated it not only along the two sinuses over the inner condyle of the os humeri through which spiculæ of bone afterwards came away, but along the one discharging by an orifice on the forearm. The cicatrix now to be seen there shows that there had actually been two distinct openings at that locality on the forearm, the lower one to a tract outside of the biceps flexor cubiti, and the upper one more on the fleshy surface of the supinator radii longus, which led into the joint by a very straight line to where its surfaces constituted by the trochlea of the humerus



and the coronoid of the ulna, and nearest in front to the integuments when the forearm is extended. The probe of delicate wire passed between those surfaces sufficiently far to indicate clearly that its point was on them and that they were not denuded of their synovial membrane — but were bound together by inflammatory products there.

The testings for the passage of the sulphur vapor in this case were made on the ala nasi of the opposite (left) side, the gas being applied by means of a gum bag over the diseased joint.

## ON THE RELATION BETWEEN THE GENERAL PRACTITIONER AND THE CONSULTANT OR SPECIALIST.

*Read before the American Academy of Medicine, November 13, 1888.*

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Four years ago I ventured to present to this honorable body some thoughts concerning "Specialties, and their Relation to the Medical Profession," which were kindly received in many directions. The subject was so large a one that it could be only partially considered within the desired limits, and the discussion of certain points relating thereto was deferred until another occasion, which I now avail myself of, by the kind invitation of your worthy President.

As the points now to be considered in regard to "The Relations between the General Practitioner and the Consultant or Specialist" have a very close bearing upon those discussed in the former paper, it may not be out of place to very briefly indicate the line of thought there followed out, and to give a summary of the argument then presented.

1. Specialism was found to be a natural, healthy outgrowth from general medicine, as one and another person engaged in the study and practice of medicine has emphasized and developed one portion or another of the vast field in which all have labored.

2. The science and art of medicine has, in company with other sciences, become so vast that no one mind is capable of fully grasping every portion of it, and every medical man is unconsciously more or less of a specialist, or more qualified in certain lines of knowledge and experience than he is in many others.

3. Specialties have aided greatly in the advancement of the science and practice of medicine, by the concentration of thought and experience in special directions, and by collecting and utilizing large numbers of cases for the instruction of those studying medicine.

4. The several branches, or specialties, into which medicine is divided, are so great and extensive each, that the study and practice of each branch is sufficient to fully occupy the time and thought of any one individual, it being difficult even to follow all the advances in any one particular line or department of medicine.

5. In order to properly follow and develop one of the specialties in medicine, the medical man should be particularly well educated, theoretically and practically in general medicine, and should have experience in the same before taking up a special branch; the highest type of a specialist is one who, after thorough training and experience as a general practitioner, develops a special branch in his practice, and more or less gradually comes to devote the greater part or all of his time to the same. In other words, the specialist should be a good physician *plus* the particular knowledge of his specialty.

6. The practice of taking up a specialty immediately after graduation, without such training and experience, is to be deprecated, and is too frequently the cause of a want of success practically, or of a narrow-mindedness which must and does act prejudicially, both for those under treatment, and for the scientific development of the branch of medicine represented.

7. The tendency to specialism in medicine cannot be arrested, both because the vastness of medical science demands it, and because the public require and will pay for the highest attainable knowledge, experience, and success in this as in all other matters relating to human comfort and welfare.

This being, then, the position of specialism in medicine to-day, what relations do exist and should exist between the general practitioner and those who stand thus in a somewhat peculiar position in the ranks of the medical profession, namely the consultants and specialists? for of necessity there must be some relations, inasmuch as they are constantly coming in contact, through the agency of those whom both seek to cure of their maladies.

It will be noticed that I have included the so-called ordinary consultants in medicine and surgery with the specialists, for the former are really, for the time at least, identical with the latter, they being called in consultation because of their special knowledge in the particular case in hand. Moreover, the true and properly-educated specialist really stands on the same footing, according to what has preceded; for he is, or should be, not only a physician or surgeon who is thoroughly acquainted with general medicine, theoretically and practically, but also one who has devoted particular attention to, and acquired peculiar knowledge and skill in some special branch or department of medicine, or class of diseases.

<sup>1</sup> Annual Meeting Oct. 4, 1884. THE JOURNAL, Dec. 13, 1884.

We may best compass our subject by considering the various points separately, and these may be discussed under two great divisions: *First*. As relates to the general practitioner's side or aspect of the question; and *Second*. As relates to that of the consultant or specialist.

*First. As relates to the general practitioner.*—Here we may first consider the negative side of the subject. The multiplication of specialties does not signify that the general practitioner is to become simply the feeder or the distributor of cases to those who have given special attention to each particular branch. It would be manifestly improper, and productive often of harm to the patient, if as each individual organ was affected he should seek the aid of, or send the case to, some one who had devoted special attention to this or that particular "ology." His education in general medicine should include sufficient knowledge to make him to cope with the ordinary run of practice in all departments, with some few exceptions, perhaps, and it may be safely said that with his acquaintance with the patient's constitution and peculiarities, he can treat a considerable share of the cases belonging to special departments quite as well as one who has made a specialty of the same. This is more particularly the case since, by the multiplication of hand- and text-books, and by the various clinics and post-graduate courses, the specialists have done all in their power to make their special knowledge as generalized in the profession as possible.

But with all the zeal which can be put forth, as we have seen, no one man can compass the whole field of medicine and surgery, with an equal proficiency in every branch, and the honest practitioner continually must find himself in perplexity in some manner or other, and must hope at least, that some other brother practitioner who has perhaps had a wider experience in that particular direction, will be able to aid him in a matter of diagnosis or treatment; and if he is perfectly honest, he will acknowledge to himself, at least, that the interest of his patient demands, and really should have aid, which he feels he cannot furnish, and the natural impulse will be to seek such aid. Hence came, in former times, consultations in many directions, medical and surgical, with older physicians who had gained more general experience.

With the advancement of the science and art of medicine, surgery became the first general specialty, and it became recognized that one who possessed a taste and showed a fitness for surgery by coolness and patience, and who kept on hand a variety of surgical implements, was far more successful in dealing with surgical cases than the one who was not thus fitted for the work; then, gradually, there was added the qualification of experience, and the surgeon was an acknowledged necessity everywhere, and surg-

ery has been now an established department for very many years.

Perhaps the most striking and conclusive illustration of the value of a further segmentation of medical practice is found in abdominal surgery, which by the arduous and brilliant labors of its devotees has made strides which could not have been imagined fifty years ago; who can reckon or even conjecture the amount of comfort and human happiness which has been rendered by the ovariectomies, numbering thousands, which have been performed by the masters in this line of work, and their followers. Surely every family practitioner does not now feel justified in undertaking serious surgical cases, or in performing ovariectomy, without some special fitness and qualifications, which comparatively few possess.

It is not necessary to carry this line of thought further, but all who have seen much of practice, must acknowledge that cases about the male and female genito-urinary organs, the throat, the eye, the ear, the skin, the heart, the lungs, the joints, and the nervous system, have presented difficulties in diagnosis and treatment which have been solved when undertaken by those who had made special study of the same.

What, then, are the relations which exist between the general practitioner and the consultant or specialist? They are those which should exist between friendly brother practitioners, advising together with regard to the very best interests of the sufferer whom they are called upon to relieve, and whose interests they are bound by their high calling to serve according to the best of their ability.

But, says one, that is well enough theoretically, but in practice it does not always work so well, and one or the other physician often suffers thereby. Unfortunately this is sometimes true, but the *principle* remains also true that the best interests of the patient, who pays his money for it, should be served; and, what is more, the *fact* remains true, that the patient *will* in the end secure the service which is most beneficial. And so it sometimes happens that the general practitioner who has not secured for his patient the best advice attainable, will receive more blame and harm by not securing the aid, or turning over the case to another, than he could possibly have received by so doing. It is a daily occurrence for one in special practice to hear a family physician blamed, and that too, often very severely, by his own patients, for not acknowledging that the case was obscure and giving the patient the aid of the service of others; and the conscientious specialist often finds it very difficult to guard the honor and reputation, it may be of his best friends who are thus berated.

With the position of specialism in medicine at the present time, it is both the duty, and the part of wisdom, for the general practitioner to give

patients the benefit of their services, and that, too, before the cases are hopeless, and even before they have exhausted every means of relief at their own disposal. For experience has shown that often gain to the patient may be had thereby, and if the patient can pay for it and is willing to do so, he has the same right to it that he has to any other element or agent which can be employed in effecting a cure. And experience has further shown that the practitioner who honestly gives his patients the opportunity of securing relief in this manner, gains quite as much from his reputation for fair dealing as he might actually lose by the fees which a specialist might secure from the same patient, or even more.

It is further a fact, that the family practitioner by no means loses all the money which may be paid to the specialist, for in the first place, patients are more willing to follow out the treatment of the latter than they are of their family physician, and will often continue faithfully under treatment, and make the necessary regular visits, when before they have consulted their family adviser only at the most irregular periods, and have followed his treatment in a most desultory manner. Moreover, the fees as a rule are higher to the consultant and specialist than the family physician can collect, so that he does not in reality lose as much as might be imagined. The reason for the larger individual fees is found in the greater amount of time given to the investigation of cases, and also the very large expenditure of time which is often made by them in acquiring their knowledge and experience in study abroad and in public practice at home.

But another reason for sharing practice with consultants and specialists is found in the rights of these latter. As medical men, fully qualified and authorized to practice, they have a claim and a right to such of the confidence and support from their fellow men as they can honorably acquire. In entering upon the practice of a specialty they voluntarily give up their claim and right to gain a livelihood from treating a greater part of the body, and confine their attention to a single organ, or group of diseases. They have just as much right to care for the disease coming within the scope which they have marked out for themselves as the general practitioner has to care for the entire human frame. Now, because a friend of a specialist, who for instance, has just moved into a locality, requires some treatment other than the one which he is prepared to give, and so seeks a general practitioner, he is at once regarded as the patient of the latter, whereas his choice would have been the specialist, if he had not voluntarily declined to treat him outside of his branch. The illustration is given to show that the specialist has a right to a certain amount of practice, which, moreover, the public are sure to accord, when it becomes aware that to do so is also to their advantage.

This brings us to the consideration of the second branch of our topic, which can be briefly disposed of, namely:

*Second.*—*The relation between the general practitioner and the consultant or specialist, as relates to the standpoint of the latter.*

1. Is it advisable for the specialist to take general or family practice? It must be granted that scientifically and practically, it is far better for him as a medical man to see something beyond his specialty, his knowledge will be more rounded and symmetrical; his views will be broader and more practical, and he will really be able to treat his patients better, other things being equal, if he can have general medical experience than if he is wholly confined to the daily round of his specialty. But, on the other hand, there are reasons why it seems impracticable for the specialist to engage in general practice; the two conflict in point of time and hours, and practically he finds that he must choose between an office practice or general work. It would be well if he could keep up his general knowledge by service as visiting physician to a general hospital, but this is not always practicable.

One of the greatest objections to a specialist's continuing in general family practice is found in the continual conflict it causes with regard to the practice of other physicians. The specialist who has successfully treated a case which had before proved obstinate is continually asked to see others in the family for other complaints, and if he is in general practice it is immeasurably more difficult to refuse than when he confines his attention to a single branch. In either case it is unquestionably the duty of the specialist to utterly refuse to take other practice in families of patients who have been referred to him for consultation or treatment; it is his moral obligation, as well as his interest, to be loyal to the brother practitioner who in honesty has sought his aid for a patient in a particular line of practice.

2. What is to be done in regard to patients who have been sent or brought in consultation, and who subsequently desire or insist on being wholly under the care of the specialist alone? This is sometimes a serious and perplexing question and one which many a consultant and specialist has found difficult to solve in individual instances. I have put the question carefully to lawyers and business men many times, not as related to their own cases, but theoretically, and the universal reply has been that the patient had a right to choose, and that the specialist was in duty bound to treat him. But our Code rightly teaches that the consultant should only act when requested by the attending physician, and undoubtedly the rule holds good that physicians should be very slow to take patients from one another, especially when confidence has been reposed in one by a brother practitioner seeking advice for a patient. And,

higher than this, stands the Golden Rule, to do to others as we would have them do to us—which if more borne in mind and acted upon would solve many problems and many difficulties.

But, on the other hand, the Code recognizes that "in consultation the good of the patient is the sole object in view," and it must be granted that patients have rights in the matter. When, therefore, patients desire and insist on being treated directly by the consultant what should be done? As I believe, the patient should be informed of the ethical aspect of the case and asked either to request a note from his physician placing him in charge of the consultant; or, should the patient notify his physician that he wishes the proposed change, and unless there is some particular reason to the contrary the choice of the patient is to be followed. When the patient comes from a distance, or the emergency is such that it is desirable for him to give relief at once (and the patient desires the change) the consultant should write to the attendant, stating the facts of the case, giving the line of treatment prescribed, and then, either ask the patient to follow the previously mentioned plan, or he himself should communicate with the family physician, stating that the patient desires him to carry on the treatment, begging a reply expressing his wishes in the matter.

At the best, such changes in the medical supervision of a case are unpleasant, both for the consultant and family practitioner and will often require care and tact to escape giving offense; and not infrequently the best intentions and the most careful actions will still fail in avoiding some means of annoyance. But, as before stated, patients have rights in the matter, and can and will choose who shall heal them.

3. Numbers of patients come to a specialist directly from his general reputation, or from some other patient, or from some other cause: should the family practitioner be consulted or referred to in regard to these cases? Theoretically it were better, perhaps, if this could be done, but in practice it is impossible or impracticable. Patients have a right to seek aid where they think they are most likely to find it, and in the present state of medical specialism they are likely to do so more and more. The most, therefore, that the specialist can do is to seek to treat his brother practitioner, who has seen the case before him, fairly, and, as the Code has it, "the conduct or practice previously pursued should be justified as far as candor and regard for truth and probity will permit." Further than this he need not go, he has a right to prescribe for the patient independently and to all practical intents and purposes that is "his patient," at least as far as relates to the particular malady for which he was consulted. In practice undoubtedly the welfare of the patient is the first object, but in benefiting the one, care may and should be exercised not to harm another.

There are other points and questions which might be considered in connection with our subject, but must be omitted for want of time. Enough has been said, however, to show that the general practitioner and the consultant or specialist are not so widely separated as some have imagined; they are brethren in one noble calling, they should both be actuated by the same high purpose to do the most good possible to their fellow creatures, and while both have their rights and privileges, both will find these rights and privileges best conserved by seeking to remember and practice the Golden Rule.

4 East 37th Street.

## PANCREATIC CALCULI AND RESULTING LESIONS.

*Read before the Section in Surgery, at the Thirty-ninth Annual Session of the Iowa State Medical Society.*

BY J. P. CRAWFORD, M.D.,

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Lithiasis of the pancreatic duct is a disease of rare occurrence, though existing perhaps much more frequently than is discovered in the uncertainty of the real pathology involved in many conditions of abdominal disease.

The last decade has brought brilliant achievements in the new field of abdominal surgery and shed new light upon the existence of pathological processes involving the abdominal organs. The laparotomist, encouraged by a fair percentage of success, boldly and fearlessly explores cystic invasion and tracks it to its origin and source of development, completely subduing it by obliteration.

The pancreas though modest and retired behind its omental veil, richly fortified in front by the stomach and colon, in point of frequency in cystic growth, rivals the *echinococcus* with its hooklets, but claims no comparison to the more fruitful ovary. Surgical exploration and autopsical research show that obstruction of the pancreatic duct from whatever cause, traumatism, encroaching biliary disturbance, pancreatic calculi, down the role to the more grievous malignant degeneration, in fact whatever may operate to occlude the pancreatic duct, and bring about parenchymatous change in the gland tissue, results in the rapid formation of a smooth, painless cystic tumor, manifesting itself by epigastric fullness and ultimately prominent display of well-defined cystic growth, as the leading diagnostic feature of the disease though difficult to differentiate from cysts of other origin.

Pancreatic calculi and the resulting lesions, is the form of pancreatic disease which I desire to describe in this paper and furnish data from a case recent in my observation. But in the case I shall report this uniformly common lesion of cystic de-

velopment was absent, which may be accounted for by the resulting interstitial change in the organ not being, perhaps, sufficiently advanced at this stage to occasion it, the case terminating prematurely from the accident of perforation due to ulceration resulting in fatal peritonitis.

In November, 1887, Mr. A. F. W., a business gentleman, 62 years of age, in the enjoyment of ordinary good health and for several weeks unusually active in business and public affairs, was suddenly taken with pain in epigastric region which he supposed to be colic. A mild anodyne quieted this down, but same pain with greater severity returned next day. Patient being away from home was unwilling to give up, and with moderate doses of morphine was able to keep going a day or two, when he took his bed in great agony, from most excruciating pain. A very worthy medical gentleman was called in attendance. Large doses of morphine were required to quiet the pain and an opiate continued to keep him comparatively comfortable.

In a couple of days other symptoms developed warranting a diagnosis of peritonitis. I was telegraphed for, and on arriving in a few hours found the patient comfortable under the opium treatment.

There was very general abdominal tenderness and pain on pressure most pronounced in the epigastric region, and extensive tympanitis over the entire abdomen.

The disease terminated fatally on the tenth day after the first manifestation of pain.

There was nothing exceptional in the case from the symptoms and conditions usually observed in a general diffused peritonitis, unless it was the very moderate amount of febrile disturbance and equally low pulse—the temperature persisting below 100° and pulse maintaining regularity at 78. Both symptoms out of all proportion to the general character of the disease which was alarming in other features.

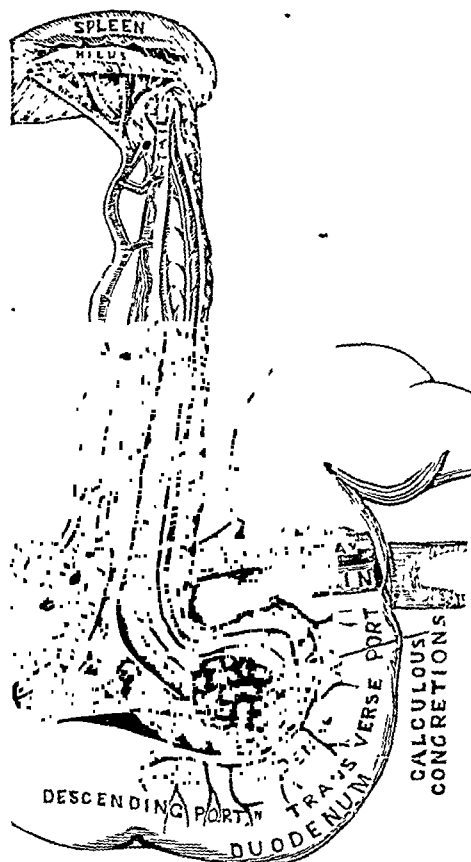
There was no manifestation of any exciting cause for the abrupt appearance of this fatal inflammation.

Rupture of the gall duct by stone was mentioned among the probable causes. An investigation was made to find the pathological element, though completely masked as far as the array of symptoms in the case indicated, that should account for this secondary inflammation to tissue, where violence is not tolerated and encroachment from any source is promptly resented.

Drs. Middleton and Allen, kindly made a post-mortem for me. The heart was perfectly normal, the lungs in condition to perform their function properly, and the liver of natural size and character. General diffused peritonitis was found with purulent exudation and inflammatory adhesions, centralized in the locality of the head of the pancreas and its relation to the duodenum having ex-

tended throughout the intestinal viscera. Under this mass of breaking down tissue with the natural relation of the parts much distorted in appearance and necessarily mutilated in consequence of the separation of the inflammatory adhesions, the pancreas was found enlarged and indurated.

On the anterior surface of the head of the pancreas, near the duodenum was discovered a nodulated condition which on closer inspection was found to be a mass of concretions as large as a peach stone made up of a number of smaller irregular shaped bodies. This mass was incarcerated in the pancreatic duct near its entrance into the ductus communis choledochus, being about an inch from the opening of the common duct into the duodenum, as shown in the cut.



The communis choledochus and cystic ducts were free, but the gall bladder was atrophied and filled with small stones.

Submitting these two formations to test, the biliary calculi when ignited burned as a torch, while the pancreatic formation refused to ignite like the cholesterol product. When analyzed, it proved to be phosphate of calcium, which is the composition of pancreatic calculi, though sometimes these concretions may be carbonate or both carbonate

and phosphate of lime. A catarrhal condition of the mucous membrane of the duct seems to favor the formation of these calculi by the precipitation of the inorganic ingredients of the pancreatic juice due to the altered chemical composition of the secretion. The wall of the duct enveloping this mass of concretions was found perforated, permitting foreign material to escape, which was the irritant provoking the fatal peritonitis.

Perforation of the walls of the duct is an accident which is liable to occur in this stage of the disease, from over-distension of the canal, ulceration from strangulation, abscess in locality of the organ and rupture of retention cysts into the peritoneal cavity. Any of these accidents set up sudden peritonitis, and as in this case may be the first marked intimation of a disease capable of such unexpected havoc to life. It still remains a surprising circumstance that so extensive a pathological condition could exist with evidence in the very nature of the case of a history antedating the sad climax, covering months, if not years, and be consistent with good health. This last statement perhaps deserves some qualification. As it refers to uninterrupted good health for a year and a-half before his death it is correct. But for several years previous to that the patient had, at intervals of three or four months, attacks of gastro-intestinal trouble lasting three or four days. These attacks would be ushered in with violent paroxysms of pain in the right hypochondriac region, extending to the median line, sometimes decided jaundice supervening. In character these paroxysms simulated hepatic colic; the passage of gall-stone was suspected, but failing to find concretions in the stools, it was uncertain whether gastro-duodenal catarrh might not account for the derangement. With the revelation which the post-mortem brought forward, it is clearly evident that either of two factors present could produce the recurring paroxysms. With the plentiful presence of gall-stone in the cyst, such phenomena would be expected almost of necessity. And could also be accounted for by the transit of a pancreatic calculi, a process so parallel to the passage of gall-stone, that it is said to be impossible to differentiate them.

It might be deserving of interest to mention in this connection a distressing symptom which the patient complained of, diagnostic when associated with other characteristic conditions, impressing him with the fear of heart difficulty, notwithstanding the most positive efforts to disabuse his mind to the contrary. It consisted of a momentary stitch of intense pain, deep-seated under the stomach and præcordial region. This would be experienced at intervals of a few hours, and at other times not for days. Such præcordial distress is spoken of as a very constant symptom attending pancreatic disease in general, when the enlarged and heavy gland encroaches upon the

solar plexus, certain positions of the body favoring its direct pressure upon this sensitive ganglia.

Lesions indicating impaction of the duct were entirely absent in the symptomatology of this case, rendering a diagnosis of calculi or any form of stenosis impossible. Aside from cancer, with its pain and cachexia, pancreatic disease in general is of difficult recognition. The particular forms are to be diagnosed only in cases where the decided indications are manifest, and then by careful elimination of allied conditions of more frequent and probable occurrence.

The train of symptoms suggestive of obstruction are the presence of the secondary lesions, notably the development of cystic growth in the epigastrium, the suspension of the physiological function of the organ which is denoted by fatty stools, rapid emaciation and debility from malnutrition; also pale yellow earthy color of the skin and the peculiar neuralgia just mentioned.

Without these manifestations a diagnosis cannot be attempted. The resulting lesions might have developed in this case if the degenerative changes in the gland had farther advanced before the accident of rupture precipitated the sudden termination of peritonitis. The perversion of the physiological function of the organ and the formation of retention cysts is due to parenchymatous changes in the tissue from interstitial inflammation set up by the irritation of the foreign bodies as well as to the immediate mechanical obstruction. Experiment has shown that in simple temporary obstruction of the duct the juice is disposed of by absorption by the tissue itself. In the *American Journal of Medical Sciences*, 1883, Johnson reported the collection of thirty-five cases of retention cysts induced by stony concretions, and from other statistics this is no doubt a very constant lesion.

Pancreatic calculi uncomplicated is scarcely amenable to treatment, from its doubtful recognition, but its resulting lesions in the nature of cysts, abscess, and accidents incident to pathological changes involved admit of surgical interference when plainly manifested.

Gussenbauer reports a case of a man with history of indigestion and rapid emaciation, pale dirty color of skin and swelling in region of the stomach. The rapid growth of the tumor behind the stomach, justified Gussenbauer to make a probable diagnosis of cyst of the pancreas or suprarenal capsule. The critical condition of the patient necessitated a surgical operation as the only hope of relief. An incision was made five inches long in the linea alba and peritoneal membrane. Omentum was detached and vessels compressed and ligated. Parietal peritoneum was sutured to the skin and the anterior surface of the cyst stitched to the margin of the wound, the cyst then drained with trocar and a fistula established.

The patient recovered and was discharged in



three weeks. His next three cases of cyst of the pancreas were mistaken for ovarian cyst.

To Dr. Bozeman, of New York, is accorded the most brilliant result, having effected a complete extirpation of the cyst. A lady was sent to him with her case diagnosed ovarian cyst. Bozeman in consultation with Thomas and Emmet confirmed the diagnosis. The patient had a history of attacks of indigestion for seven years. Two years later abdominal enlargement began to appear and the few weeks previous to the operation, filling up rapidly and symmetrically the whole cavity. The usual incision for ovariectomy was made and two gallons and a-half of fluid evacuated. When the cyst was partially withdrawn it was found to be free from the ovaries and its origin traced to the juncture of the outer with the inner two-thirds of the pancreas. The pedicle was secured and cut off, after separating quite an extensive adhesion. Patient made good recovery and was discharged cured on the 38th day.

Dr. N. Senn, of Milwaukee, reports a case of pancreatic cyst with the history of traumatism. A laborer was thrown from a wagon, striking the ground on the left side of his abdomen, a heavy keg falling upon his back. In a few days diarrhoea set in, reducing his strength. Complained of sensation of fulness and weight in region of the stomach. Tumor appeared occupying the epigastric and left hypochondriac space. Dr. Senn limited his diagnosis by exclusion to either a sterile echinococcus or pancreatic cyst, and decided to perform laparotomy and stitch the cyst wall to the peritoneal covering of the wound, and not evacuate till adhesions had formed, to protect against danger of extravasation into the cavity. He found the cyst wall so tender he could not prevent laceration and was compelled to evacuate and drain the cyst, which he did safely, by turning patient on his left side. Other than this he carried out the plan of his operation, finding a cyst which led to the tail of the pancreas. A fistula was established and in a few weeks patient was discharged in good health with perfect digestion and fistula entirely closed.

These charming successes in the midst of numerous disastrous failures, in attempts to secure the same results, only show the possibility of what may be accomplished in favorable cases, and when it is evident there is no other hope of saving life, such interference should be carefully considered.

Recent operations for the removal of biliary impaction and the more novel method of washing out and draining a peritonitis, suggest a way of arriving at the primary processes of these lesions, above described, and the possibility of removing calculi and directly reaching the sudden accidents, in consequence when fatal in character after ascertaining their true nature by diagnostical laparotomy.

But such serious interference could not be entertained in cases like the one under consideration, for in this instance the good health of the patient up to the attack of peritonitis and in the absence of any manifestation of the presence of such a lesion as was found to exist by the autopsy, the exciting cause to the peritonitis could not be other than a mystery and explorative measures unwarranted.

In other cases where the history has been significant, the primary lesions determined, inciting such a peritonitis, bolder measures might be wisely considered.

It is evident that we are in the dawn of an era in surgical progress of clean hands and skilful manipulation, when explorative laparotomy as a diagnostic measure will not only be regarded as a feasible, but a practical procedure to recognize many doubtful pathological conditions that are amenable to successful surgical interference. Until experience and legitimate success shall have crowned such an era, the past and yet present conservative and expectant attitude must not be indiscriminately abandoned.

## MEDICAL PROGRESS.

**MAMMARY INFLAMMATION.**—At a recent meeting of the Royal Academy of Medicine in Ireland, DR. ANDREW HORNE read a paper on "Mammary Inflammation and its Treatment by Elastic Pressure." He believed the methods usually recommended and taught were gravely defective. Suppuration ought to be a very rare occurrence. Inflammation of the breast was almost always the result of infectious material gaining entrance through fissures and cracks of the nipple, and too much attention could not be paid by the attending physician when such a condition exists in the nursing mother. The method of treatment advocated was to envelop the breast in a layer of absorbent cotton. Having first painted the breast with a 5 per cent. solution of oleate of mercury and morphia, then having procured an elastic web bandage, five yards long by three inches wide, he makes equable and gradual pressure over the inflamed gland, thereby securing the most perfect rest possible. DR. MACAN said he had long used compression of the breast in certain cases, although he did not regard it as suitable where there was suppuration; but he felt that he could recommend Dr. Horne's plan, even where there was suppuration, as strongly as in other cases. It gave great relief to the patient, and was, he thought, a great step forward, especially as they now stopped poisoning their patients for affections of the breast. DR. MASON said the plan recommended would greatly extend the treatment of sore breasts by pressure. Pressure

was a very old mode of treatment; but the graduated mode of applying it which Dr. Horne put forward was comparatively recent, and seemed to have had most successful results. Varieties of plasters had for long been before them. Belladonna plaster he believed to be one of the best. In this kind of treatment it was most important to give the breast perfect rest. It was remarkable that women who did not attempt to nurse their children did not suffer from sore breasts. DR. HORNE, in reply, said the bandage he used was an ordinary web elastic. One of the reasons why he had adopted this bandage instead of elastic plasters, was that it was most difficult to put on elastic plasters in such a way as to get even pressure. Another reason was that elastic plasters were apt to produce an eczematous eruption on sensitive skins. That would never happen with his bandages. The belladonna and cere cloth plasters, which for a long time used to be applied in the Rotunda, no doubt used to give a great deal of relief; one reason for that being that they prevented the breast from being rubbed or used, or anything from happening to it which would lead to suppuration. As to Martin's bandage, patients to whom he had applied it complained that it caused uncomfortable heat; whereas his bandage, being more porous, allowed a freer circulation of air.—*Lancet*, Dec. 29, 1888.

A SIMPLE TEST FOR SOME IMPURITIES OF BALSAM OF TOLU.—R. A. CRIPPS: Balsam of Tolu is one of those products which, on account of its price and resinous nature, is very liable to adulteration. Such obvious adulterations as sand, earth, chalk, etc., can readily be detected, but this is not the direction in which most adulterated samples are sophisticated, other resins being naturally selected for the purpose. I do not claim any originality for the reaction which constitutes the test I now propose, but I have seen no communication recommending its use in testing balsam tolu, which is sufficient reason for bringing it before your notice this evening. About 30 grams of the sample are digested in bisulphide of carbon for about fifteen minutes, keeping it gently warm by occasional immersion in hot water. The clear liquid is poured off, evaporated to dryness, and, when cold, sulphuric acid added to dissolve the resinous extract. A bright red-rose carnation is produced; which, in the case of genuine tolu, remains of a distinctly rose hue for some considerable time. If, however, the sample be adulterated with either storax or ordinary resin, the rose color rapidly becomes more brown in tint. The best way to apply the test is by performing the operation upon a genuine sample by the side of the suspected one. In this way a distinct difference in tint can be observed if only 1 per cent. of the adulterant be present; with 4 per cent. of resin, or rather more

of storax, the difference in tint can be readily distinguished without the blank experiment. If to the sulphuric acid solution a fluid ounce of water be rapidly added the color of the resulting liquid is much duller and paler when ordinary resin is present than with the pure balsam.—*Pharm. Journal*.

NEW METHOD OF DESTROYING TATTOO MARKS.—DR. VARIOT has discovered a means of obliterating tattoo marks, a result hitherto reported to be difficult, and even impossible of achievement. He pours on the marked spot a concentrated solution of tannin, and works it into the skin by a series of pricks, just as in tattooing proper. A certain quantity of tannin is thus introduced beneath the skin. He then rubs the part with nitrate of silver, and allows the solution of the salt to remain *in situ* until the prick marks show out as black spots. The caustic is then wiped off, and the result is the formation of a black stain of tannate of silver. Inflammation is set up, and in the course of a fortnight scabs form, on the disappearance of which no trace is left of the original design, the only *souvenir* being a reddish scar, which in time becomes less visible. Various other plans have been tried without success—scarification, the introduction of opaque powders and caustics into the skin, etc. The tannin in this operation acts as a mordant, and in no case did he have to deal with troublesome suppuration, although if the area be large it is well to do a piece at a time.—*Medical Press and Circular*.

THE ANTIPYRETIC, "PYRODIN."—Under this name a new drug has been introduced, which has undoubted temperature-reducing properties of a high order, the practical application of which, however, is much interfered with by its toxic action. Pyrodin contains as its active agent acetylphenylhydrazin ( $C_6H_5N_2H_2C_2H_5O$ ) a crystalline powder very sparingly soluble in water. According to the clinical and experimental observations of Dr. Dreschfeld, of Manchester, which have been confirmed by M. Lépine, of Lyons, pyrodin acts in the same manner as, but more powerfully than, antipyrin, antifebrin, and phenacetin; and it has also been used effectively in migraine and other forms of neuralgia, as in the lancinating pain occurring in locomotor ataxy (Lépine). Great caution, however, is required in its administration, as it is apt to produce jaundice, followed by anæmia, and even more serious symptoms due to hæmoglobinaemia. Milder toxic symptoms have occasionally followed the administration of acetanilid or antifebrin, and also of phenacetin; but as phenylhydrazin is a much more powerful poison than anilin, so also are the toxic properties of its acetyl compound much greater than those of acetanilid. In face of the poisonous

qualities of pyrodin, we must warn the profession against the use of this drug generally. In exceptional cases, and where other antipyretics have failed, it may be useful, but great caution should be used. Small doses only should be given, and at sufficiently long intervals to enable one to watch any toxic effects, with the first appearances of which the drug should be stopped. —*British Medical Journal*.

**THE ETIOLOGY OF TETANUS.**—According to M. VERNEUIL, the microbe of tetanus comes from the horse. Following this opinion M. Richelot has cited, in a paper before the Académie de Médecine, two cases of tetanus supervening after ovariectomies, notwithstanding the most vigorous antiseptic precautions, and he attributed them to the emanations from a layer of manure deposited in the court of the hospital the night before the operation.

M. Ferrillon also reported a case following a wound made by a horse shoe soiled with manure.

On the other hand, M. Gailhard, a naval surgeon, found tetanus constantly on board an iron-clad vessel in which a horse never came; but might not the cases come from the emanations from the litter of the beef cattle on board?

Dr. Abadie, during the war of 1870, witnessed a severe epidemic of tetanus in the little village Or. Wounded patients left at houses escaped free, but those who were necessarily placed in a church on straw succumbed to tetanus. This is an important detail, for that straw was found to be soiled with detritus and dejections, either animal or human. M. Abadie thinks that in Richelot's case, one cannot trace the cause of the tetanus to direct inoculation from the hands or instruments, but that the transmission of the germs coming from the emanations of the manure sufficed to explain the infection. In other cases he had always found the close presence of manure.

In summing up after him, the etiology of tetanus, we may conclude that the infectious germ of tetanus does not exist in the atmosphere, and that its favorite seat is in the manure heaps, where fermentation goes on under conditions of temperature and humidity favorable to its evolution.—*Gazette Medicale de Liege*. Translated for THE JOURNAL.

**LAPAROTOMY FOR ASCITES.**—DR. T. A. ASHBY, of Baltimore, in the *American Journal of Obstetrics* for January, advocates explorative laparotomy being done in cases of ascites without any ascertainable causative conditions. Where the symptom exists, but there is nothing within reach by manipulation or physical signs can reveal any form of abdominal tumor or structural change to account for the same, then Dr. Ashby says that an operation to aid a more thorough exploration of the abdominal and pelvic viscera

is justified, but it should never be undertaken until all other methods of diagnosis have been found inefficient, and even then the surgeon should have a reasonable assurance that the information sought for can only be found by this method. In ascertaining axiomatically that explorative laparotomy, carefully and aseptically performed, is, comparatively speaking, free from danger, and should be undertaken in all cases where the surgeon has a reasonable hope of rendering a service commensurate with the risks it imposes, he adds that the latter are less in abdominal accumulations through the greater tolerance of interference possessed by the peritoneum in such cases.

**'GOOD BREAD FOR DIABETICS.**—Samples of bread for diabetics were lately shown to the Section for Clinical Medicine, Pathology and Hygiene of the Massachusetts Medical Society by DR. J. A. JEFFRIES, who furnished the following formulas for their preparation:

One cup of graham flour; one cup of best bran previously scalded with one cup of boiling water; two eggs; German yeast or baking powder; salt to taste; one cup of milk or water. To be mixed with a *spoon*.

Such a bread contained 17.72 per cent. of starch, the equivalent of 19.68 per cent. of sugar.

One cup gluten flour; one cup best bran previously scalded; one teaspoonful of baking powder; salt to taste; two eggs; one cup of milk or water. To be mixed with a *spoon*. If the hands are used the result will be even more disastrous than in the making of ordinary bread. This bread is healthy, palatable, nutritious, and contains but 4.57 per cent. of starch, equal to 5.08 per cent. of sugar.

**ELECTROLYSIS IN PROSTATIC ALTERATIONS.**—Electrolysis, while applicable to all strictures of the urethra, is of permanent benefit in many of the morbid alterations of the prostate. It has an anæsthetising influence upon the terminal nerves at the point of application; it aids in overcoming spasmodic stricture of the prostatic urethra, in early relaxation of spasm by muscular exhaustion following the continued overstimulation; it seals the distention and relaxation by natural re-productive processes; it excites absorption and relieves the patient.—Dr. D. S. Davis, of Birmingham, Alabama, before Southern Surgical and Gynecological Association.

**INCOMPATIBILITY OF COCAINE AND BORATE OF SODIUM.**—In a paper to the *Société de Pharmacie*, M. LEVAILLANT said that in mixing these substances for collyria or gargarisma he had found a precipitate of cocaine. This will disappear on the addition of a few drops of glycerine.—*Arch. de Ph.*, November 5, 1888.

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SATURDAY, FEBRUARY 2, 1889.

THE SUPPRESSION OF DIPHTHERIA.

At the meeting of the Chicago Medical Society held January 21, DR. C. W. EARLE read a paper on "The Contagious Character of Diphtheria." The writer agreed with the generally accepted view of its etiology, but claimed that the profession seemed to quite frequently fail to grasp the real necessity for notification, isolation and disinfection. In the discussion which followed, DR. O. C. DEWOLF spoke of the difficulty he experienced in receiving notification of the cases to enable him to placard houses. He was quite sure that no means was more efficient in preventing the spread of diphtheria than the simple placard, and in his experience householders did not object to the notice, as it was for the general good; but he desired an expression from the Society as to the duty of every medical man to promptly notify the Health Department, of the occurrence of diphtheria.

In closing the discussion Dr. Earle moved the adoption of resolutions declaring it the duty of the profession to so report, and the resolutions were adopted with only one or two dissenting votes.

When the great mortality from this Northern scourge is considered, it is wonderful that no more active steps to limit its spread and propagation are taken. There were nearly a thousand deaths in Brooklyn, and eight hundred and fifty-eight in Chicago during the past year! and these great numbers are not materially in excess of the ratio in other cities of the Northern Section of the Union.

If there were ten per centum of this mortality from yellow fever, small-pox or cholera, public opinion—the potent factor in moving things in this country—would compel immediate concentration of sanitary forces upon this important question.

It is well known that isolation of the cases and disinfection will prevent its spread, why not apply the remedy?

The method of disinfection may well claim attention, for unless well done it is but a broken reed to lean upon. The disinfection in cases of diphtheria should include thorough application of antiseptic solutions to the throat and nasal passages of the invalid; disinfection by bichloride of mercury, of all excreta, whether sputa or fecal matters, the boiling of all linen used or worn in the bedchamber, the frequent sponging of the walls of the sick chamber with the "blue solution," or the solution of bichloride of mercury, the spraying of the upholstery with the same, and, after disposal of the case, the thorough fumigation of the sick chamber with the fumes of burning sulphur, and if there be a carpet, it should be sent to a steam cleaner.

These are the means which have been taken by that most efficient health officer, DR. J. V. PORTER, U. S. A., at Jacksonville, Fla., for the prevention of the recurrence of yellow fever, and the same active and energetic treatment is needed elsewhere in dealing with the greater pestilence, diphtheria. Let us hope that the efforts of health officers everywhere, in trying to limit the spread and arrest the propagation of diphtheria, may be supported and sustained by every means within the power of the profession.

THE AMERICAN MEDICAL ASSOCIATION.

"So smile the Heavens upon this holy compact."

How the conditions have changed since the first regular meeting of the American Medical Association, in Philadelphia, forty-two years ago! Then, it was viewed as a triumph, that there were two hundred and fifty delegates in attendance, in spite of the New York opposition, now a meeting with less than two thousand members is looked upon as an ordinary affair and the membership of the Association is nearly five thousand! The original founders of the Association aimed high, they insisted that the colleges

should hold their courses for six months, and that a high standard of preliminary education should be required of all intending to study medicine. At that time many of the medical colleges held terms of only *fourteen weeks* in duration, and persons were graduated after an attendance upon a single course of lectures; a variable period of "practice" being accepted as the equivalent of a course of lectures. Even then there were persons who opposed organization, who considered themselves too great to be dictated to, and who felt that their privileges must not be restricted. Then, as now, the head and front of the opposition clique was in New York. Then the opposition was centered upon the matter of membership, now it is upon an alleged Code difference; but during the entire period there has been opposition, and the opposition party have made use of whatever pretext happened to be uppermost; and all the time there has been an assumption of superiority, an alleged upper crust of medical wisdom that looked upon the banding together of the rank and file of the profession as an invasion of the inherited rights of the anointed. The descendants of the ancient objectors have succeeded of late in making it perfectly clear in their own minds at least, that they alone of the medical men of this country, have the energy, the staid ability and the medical genius of America; that all else is meretricious and beneath notice, that to them alone has accrued that truly sanctified beatitude that ensures them a place in the niche of fame, where no plain Association man, however well-meaning, need ever hope to attain.

For the benefit of these *unco guid* we have only to say, that the old Association has come to stay; that her members are proud of her past and they mean to see to it that her future is no less glorious, that they have but one ambition, and that is to see the Association become the most useful and the greatest on earth. Although they prefer peace, they mean to fight when they are attacked, and they never intend to stop working for the Association until its membership shall pass the limit of twenty thousand men.

Why work for the Association? Why simply this, enlarged membership means unlimited resources, plenty of money means a good building, owned by the Association, where the members may have free access to their library, either in

person or by their representative, and where their JOURNAL may be published. And such a Journal! With money, a correspondent may be furnished for every clinical center of the world, and the clinical gleanings of the universe, may be laid before the owners of THE JOURNAL every week. It could have no rival, for no private publication could have such sustained resources or such hearty and enthusiastic support. Investigations under the auspices of the Association could again be undertaken, and all the power of increased wealth would be manifested by the Association. It could dictate terms, to every person or organized body that opposed the march of medical progress, and itself shape the medical matters of this Continent.

Is there not reason enough why every member of this Association should go earnestly to work? Should he not benefit himself? Is it not clear why the descendants of the ancient enemies of the Association should desire to crush it now?

But there is one thing the Association must steer clear of, if it hopes for success; that is, it must put itself squarely against the office-seeking mania that developed itself at Cincinnati, established headquarters and made its adherents ridiculous even in the eyes of their friends; fortunately the Nominating Committee put a quietus on that business, as they may usually be depended on to do when occasion offers, but beware of that device of the enemy, the "Executive Council." Do not supplant the Nominating Committee. Let us support the freedom of its members, and not strangle their individuality by a resort to a star chamber plan of conducting the business of the Association. Let the members be free as the air, and allowed to vote for what they please concerning the working of our Association, and all will be well; suppress their present freedom, exalt a clique, they will keep in control, and the downfall of the Association will surely follow.

The foregoing are the views which actuate us in urging the present membership to stir themselves in securing new members by application. The need of new members is apparent, why then should not each member go quietly to work and bring in one new one? The work is easy, will it be done?

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THE next meeting of the Association will be held at Newport, Rhode Island, June, 25, 1889.

## EDITORIAL NOTES.

**TYPHOID FEVER AT LAKE VIEW.**—The City of Lake View, Cook County, Illinois, has an epidemic of typhoid fever. It is alleged that there are now nearly fifty cases of the disease within the corporate limits of Lake View. For a long time it has been charged, that the water supply of Lake View was contaminated with sewage, and many families have been buying Waukesha and other spring waters, and it is said to be a fact that the typhoid has only attacked families using the public water supply.

**THE annual report** of the Health Officer of Brooklyn shows a greater mortality from diphtheria alone, than have died from yellow fever in Florida during the same period. The report shows that 984 deaths occurred in Brooklyn from diphtheria in 1888.

**STATE MEDICAL SOCIETIES.**—Secretaries of State Medical Societies are respectfully requested to send their names and addresses to the Editor of *THE JOURNAL* as early as possible.

**ANTIPODAL HOSPITAL REFORM.**—The proposed new regulations of the Sydney Hospital provide for the appointment of a Medical Superintendent at £500 per annum with quarters and rations, and the reduction of the annual salaries of "resident medical officers" from £250 to £100.

**PRIEST AND PHYSICIAN DIE TOGETHER.**—A special dispatch from Springfield, Mass., to the *New York Commercial Advertiser* says: Dr. William Breck, a distinguished physician, died suddenly while assisting at the last moments of Vicar-General Healy, of the Roman Catholic diocese of the same city. Dr. Breck was senior surgeon of the Springfield Hospital, an ex-President of the Hampden Medical Society, and a member of the Massachusetts Medical Society. He was also for many years surgeon of the Boston and Albany and New York, New Haven and Hartford Railroads. Dr. Breck was possessed of rare natural gifts for his profession and was especially skilled in surgery.

**THE MEDICINISCHE MONATSSCHRIFT.**—A. Seibert, of New York, has assumed editorial control of the *Medicinische Monatsschrift*, published in that city. In the circular announcing the change a reason for issuing a medical journal in German on this side of the water is given in the statement

that "it is planned to have a complete number of abstracts from the latest medical literature of America and of Germany in each edition, thus enabling physicians here to get a glance at the latest German publications, as well as enabling German medical writers to at once come in contact with American medical productions." These are very excellent objects, but would they not be as well subserved by issue in the English language or publication in Berlin?

**NEW CHAIR AT THE PHILADELPHIA POLYCLINIC.**—We are informed by Dr. H. Augustus Miller, chairman of committee, that S. Weir Mitchell, M.D., LL.D., has been elected Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine, an additional chair upon that subject being created.

**ASSOCIATION NEWS.**—President Dawson is informed that the work of the Section on Surgery, of which Dr. Dandridge is President, is already far advanced. A prominent topic in the Section work so far as arranged is the discussion of the question, "Lithotomy or Lithotripsy?"

**INSECT INSTINCT AND ADULTERATION.**—Bees are said by the *Lancet* to be unerring connoisseurs of saccharin substances. To the human palate cane sugar, beet root sugar and saccharin, are pretty much alike, but bees will have nothing to do with the last two. They are partial to glycerine, but discriminate against impure samples. What is wanted in the country is an insect that will instruct inmates of hotels and boarding houses in the mysteries of the butter-dish.

**CONVALESCENCE OF SIR WILLIAM GULL, AND SIR WILLIAM JENNER.**—The *Lancet* states, under date of the 12th inst. that Sir William Jenner and Sir William Gull are improving in health. The former expected to be able to leave London at the end of the month for a few weeks' rest, and the latter was just able to leave his room.

**DR. VON PETTENKOFER KNIGHTED.**—Dr. Max von Pettenkofer, professor of hygiene and state medicine in the University of Munich, has been made Knight of the Order of the Crown of Italy, a similar honor to that conferred upon George M. Pullman of palace-car fame.



## OBITUARY.

IRA RUSSELL, M.D., of Winchenden, Mass., died at his residence, Dec. 19, 1888, æt. 74. He was born at Rindge, N. H., graduated at Dartmouth College, 1841, and received his medical degree from the University of New York, 1844. He was surgeon in the 11th Mass. Regulars, volunteered in the war, at the close was promoted. Dr. Russell was a member of the Massachusetts Medical Society and of the American Medical Association, 1858.

C. N. CAMPBELL, M.D., of Dutchess County, N. Y., died Dec. 21, 1888. He was a graduate of the University of New York, 1848. He was a leading physician and had held many offices of trust in the county. Was surgeon of the 115th N. Y. Volunteers in the late war.

THOMAS J. EDWARDS, M.D., of Baltimore, Md., died at his residence of heart disease, Dec. 15, 1888, æt. 48. He was a native of Northumberland County; although an M.D. he devoted himself to teaching a Grammar School.

JAMES A. EMMERTON, M.D., of Salem, Mass., died Jan. 2, 1889, æt. 54. He was a graduate of Harvard. Served as a surgeon in the late war.

THOMAS BRAIN GUNNING, D.S., of New York, died at his residence on Staten Island, N. Y., Jan. 9, 1889. He was called to Washington in April, 1865, to attend the injury to Secretary W. H. Seward, and was a writer of ability in his specialty.

DAVID J. MCKIBBEN, M.D., of Ashland, Schuylkill County, Pa., died Dec. 19, 1888, æt. 65. He was a graduate of the University of Pennsylvania. He served as a surgeon through the war and was promoted Lieutenant-Colonel for meritorious services.

CHARLES L. MINSTER, M.D., of Philadelphia, Pa., died Dec. 14, 1888, at his residence. He was a graduate of the Pennsylvania Medical College under the régime of Professor McClellan.

JOHN J. MORAN, M.D., of Falls Church, Va., died in the city of Washington, Dec. 15, 1888. While a resident of Baltimore, Md., he had the melancholy duty of attending Edgar Allen Poe in his last illness. The Doctor became widely known for his defense of the Poet, and maintained that he did not die of alcoholism.

JAMES SCOTT, of Lebanon, Ohio, died at his residence, Dec. 17, 1888, æt. 73. He was a native of Washington County, Pa. He may not have practiced medicine, but won fame as the author of the Scott Liquor Law of Ohio, and was spoken of as a doctor.

ALFREDRICK SMITH, formerly of Little Falls, N. Y., died in the city of New York, Dec. 14, 1888, æt. 88. He was a native of Saybrook, Conn. He had long since retired from practice.

EDWIN M. SNOW, M.D., of Providence, R. I., died of heart disease, at his residence, Dec. 24, 1888. He was born in Pomfret, Vt., in 1820. Graduated as M.D., at the College of Physicians and Surgeons, New York, 1844. For nearly thirty years he was the able superintendent of the Health Department and City Registrar of Providence.

PASSED-ASSISTANT-SURGEON W. G. G. WILSON, U. S. Navy, died at Philadelphia Navy Yard, Jan. 23, 1889.

JOSEPH L. BODINE, M.D., of Trenton, N. J., died of heart-failure, æt. 49, Jan. 2, 1889.

## SOCIETY PROCEEDINGS.

## Obstetrical Society of Philadelphia.

*Stated Meeting, Thursday, December 6, 1888.*

THE PRESIDENT, T. M. DRYSDALE, M.D.,  
IN THE CHAIR.

*(Continued from p. 133.)*

DR. J. M. BALDY said that he had never used electricity in his gynecological practice for the simple reason that he had not felt competent to get the best results, not being an electrician, nor had his observation of the work of others made him desirous of doing so. He had, however, done still better—he had put himself in the way of observing the work of experts in this branch of practice. What he saw at Apostoli's clinic was entirely negative.

DR. T. M. DRYSDALE had not intended to take part in the discussion, but he could not permit what Dr. Baldy had said to go unchallenged. He had had some experience in this matter, having been working at it pretty steadily for the past three years, and he intended shortly to give his results to the Society. He thought that the great mistake in regard to electricity was that its advocates have claimed too much for it, but it must be admitted that many of these claims had been

proven and its positive value established by the results of practice. It is certain, for instance, that in some forms of hemorrhage from the uterus there is no other agent that will take its place. He had seen it cure metrorrhagia when ergot, erigeron, local applications of iodine and, in fact, everything else has failed. Again, he had seen large plastic exudations in the pelvis entirely disappear under the use of currents of electricity. He had used it in only four conditions: pain, hemorrhage, plastic exudations and uterine fibroids, and experience had taught him that there was a good deal in the manner of application of this powerful agent. He had not adopted all of the methods of Apostoli; for instance, he never punctured a uterine fibroid, believing that the practice is a perilous one and entirely unnecessary, for without it he had met with at least equal success with those who used it. In his hands it had proven decidedly successful in the treatment of uterine fibroids, resulting, in many cases, not merely in arresting their growth and checking hemorrhage, but in their entire cure. One of these cases, in which there was a complete disappearance of a uterine fibroid, was reported by Professor Skene at the meeting of the Gynecological Society at Washington. Six years ago a patient of his removed from Brooklyn to Philadelphia and was sent by him to the speaker. She was suffering from excessive hemorrhage, the result of a submucous fibroid about the size of a small cocoa-nut, which he removed by enucleation. She afterwards returned to Brooklyn and had no further trouble until two years ago, when she commenced bleeding again. After being treated by several physicians she came to him. On examination he found a soft, interstitial fibroid tumor about 3 inches in diameter. She could not remain in Philadelphia at the time, but in three months she returned, when the tumor was found to be growing rapidly, while she was greatly reduced by repeated hemorrhages. In October, 1887, the use of electricity was commenced, and in April, 1888, she returned to Brooklyn and was examined by Prof. Skene, who found the tumor had entirely disappeared. He could give many other instances, but should reserve them for a future paper.

DR. JOHN B. DEEVER asked whether the *rationale* of the gynecological treatment is not the same as in that of urethral strictures. In his hands this had proved utterly useless.

DR. JOSEPH PRICE thought it would be just as well if every one would give their bad results as well as good.

DR. H. A. KELLY said he had seen some good results and felt that in a limited number of cases we shall be successful.

DR. B. F. BAER said he was glad to hear Dr. Kelly, as he supported the position which he had taken before the Society at the last meeting.

Many of these cases are benefited and practically cured by this treatment, used with other remedies. He did not know the meaning of electrolysis if it was not the destruction of organized tissue by resolving it into its elements, and to get this action a higher power than one would be warranted in using must be applied.

DR. M. PRICE said that he had only found two forms of fixation of the uterus. One is non-inflammatory, the other bound down by inflammatory bands. It was absolutely useless to tell him that a uterus bound down by adhesions could be replaced. It would be as easy to believe that adherent fingers and toes, resulting from a burn or scald, could be relieved, as that electricity applied to the pelvis could release adhesions of the uterus, when it is all that we can do at times to tear them loose with the finger. In regard to massage, it is absolutely absurd to talk of any patient submitting, who has any decency, to a man fingering her vagina, by the week. If there were inflammatory trouble it would do mischief. He had a case where electricity had been used and where all sorts of applications had been made. He was positive that there was pus. The temperature was 103°.

DR. GOODELL could not allow the remarks which Dr. Price had just made to go unchallenged. He believed that massage of the fixed womb could be employed with propriety and without the indecency alleged by Dr. Price. He had, with Dr. Taylor, treated a case in which a pelvic inflammation had been set up by treatment at the hands of an irregular practitioner. She almost died, but finally recovered, with the roof of her pelvis feeling like a hard board. The womb was enlarged and absolutely immovable. She had menorrhagia and constant pain. He began treatment by application of a mixture of carbolic acid, iodine and chloral and by using uterine massage. In doing this one simply passes one or two fingers behind the womb and catching it from above with the other hand, rocks it from side to side and backwards and forwards, stretching the adhesions and separating them if possible. Dr. Taylor administered electricity locally. To-day she is in rude health. He had closely watched the growth of electricity and had always felt that there were remedial virtues in the agent which would be developed. Yet while he believed that we could get a great deal of good from it, he did not believe that it would cure pus tubes or suppurating ovaries, neither does he believe it will remove organized adhesions, although he felt sure that it would cause the absorption of recently deposited lymph which is not organized. He knew from unquestionable facts that in fibroid tumors in which hemorrhage is a prominent symptom, electricity an admirable agent, but he was not ready to accept the statement that it will reduce the size of fibroid tumors either permanently or without subjecting the patient to more risk than the opera-

tion of oöphorectomy. He knew of one of his friends who has had two deaths, another has had one if not more deaths. A third applied electricity to the womb of a lady in his office and she died of inflammation a few days later. A fourth friend met with the same disaster, although he is an authority on electricity. On the other hand he knew the wife of a physician who had been treated in various ways, without benefit, for hemorrhage coming from a fibroid tumor. The curette, however, had not been used. Three applications of electricity cured her. Her husband assured him that he had two or three other patients cured in the same way of hemorrhage. He thinks there is a great future before electricity, especially in those cases in which operative procedures should not be resorted to, and in cases of recent pelvic exudation.

DR. M. PRICE said that Dr. Goodell started out with a very pretty case indeed. The pelvic abscess was evacuated and all that was risking her life was removed. Unless there was multiple abscess the woman was safe after this discharge.

DR. J. M. BALDY did not mean to deny that electricity would relieve pain and hemorrhage in vascular tumors. Electricity is, however, a dangerous remedy used indiscriminately and in large doses, where we do not know the exact condition of affairs.

DR. J. PRICE said that, in regard to the mortality, Dr. Chadwick, of Boston, says that he has had two fatal cases out of eighteen and that he has given up its use. With thirty-one hysterectomies in Tait's experience, and no deaths, and thirty-eight in Keith's, with three deaths, we see that the mortality following electricity has been greater than that of hysterectomy in the hands of such men as Tait, Keith, Bantock, Thornton and others. He had a case similar to the one of Dr. Goodell's. The pus was evacuated. He did not attempt to release the fixed uterus. The woman is now pregnant.

DR. TAYLOR said that his experience had been chiefly with pelvic deposits. He had used electricity very little in antifixion. In these cases rapid dilatation has relieved the trouble in a shorter time. In menorrhagia the curette answers the purpose sufficiently well, and in seventy per cent. of the cases it relieved the trouble. In regard to gonorrhœa, he would simply state that he did not deny that it may be a cause of pelvic trouble. He was very glad to hear of Dr. Drysdale's success in the treatment of fibroids, but he did not think we could conceive of an electrolytic action sufficiently extensive to cause breaking down of a fibroid unless there was an electropuncture.

DR. T. H. BRADFORD said that if Dr. Baldy had seen the cases to which he had referred, at a later period he would have found that they had been benefited.

## Suffolk District Medical Society.

### SURGICAL SECTION.

*Stated Meeting, January 2, 1888*

PRESIDENT, EDWARD H. BRADFORD, M.D., IN THE CHAIR.

DRS. G. F. GRANT, D.D.S., and H. A. BAKER, D.D.S., presented a paper on

### THE TREATMENT OF CLEFT PALATE,

who referred to the history of the use of artificial appliances in the treatment of this deformity, and exhibited the apparatus and patients wearing it.

Drs. Charles B. Porter and J. Collins Warren opened the discussion in reference to the value of surgical interference.

DR. G. F. GRANT referred to twenty-one years experience in the treatment of cleft palate by mechanical appliances, beginning just after the appearance of a paper by William Suersen, of Berlin, in 1867.

The results of surgical operation are unsuccessful because, 1, under the most favorable conditions there is no union of the divided palate; 2, there is not so much improvement in speech as was hoped; 3, there is an increased difficulty in the adjustment of, and mechanical appliances afterward.

In 1873 and 1874, this subject was occupying the attention of Drs. Bigelow, Warren, Hodges, and Cabot. At this time Dr. Grant had his first success with a mechanical appliance, in the case of a patient 14 years of age, in whom Dr. Warren advised no operation, but an artificial plate. After its application there was a noticeable improvement in speech directly, and there was a gradual increased improvement for a year, when it was very marked. For the last ten years, the patient has been a teacher in the public schools of one of the large towns in Massachusetts.

Since 1871, Dr. Grant has treated 115 cases of congenital fissure with the result justifying the conclusion, that there is no reasonable doubt as to the success of the appliance. After the use of an appliance the whole system of speech is so changed that it is always retained, even on removal of the appliance, and thus the patient can form his words better than he did before he had the appliance introduced.

DR. GRANT thinks that the importance of the constrictor laryngeus muscle in the treatment of these cases is overestimated. According to his experience, the appliance can be adjusted with success as early as the seventh year of age. He emphasized the importance of a proper operation on the hare-lip, which generally accompanies the defect of the palate, so as to secure the greatest mobility, since a short and inflexible lip-wire interferes with the articulation and the obtaining a cast of the condition.

In illustration, Dr. Grant exhibited a patient for whom he had adjusted an appliance. His replies to questions from the members of the Society, as well as his reading both with and without the appliance, testified to the great improvement in his speech.

DR. H. A. BAKER said that the first mechanical appliance adjusted and worn successfully in a case of fissure of the palate, was that devised and manufactured in 1841 by Dr. Stearns, a physician, for himself. His apparatus was very complicated and had many springs. Moreover, he did not select a permanent material. Soft vulcanized rubber which he used has a life of only  $2\frac{1}{2}$  or 3 months to a year.

In 1860 Dr. Norman W. Kingsley simplified Stearns' apparatus and used metal moulds instead of wooden in its construction, thus securing a smoother result with a better finish.

In 1867 William Suersen, of Berlin, used permanent materials of hard rubber, and his obdurator had a posterior wing going to the posterior pharyngeal wall, which was closed by the muscles.

In 1881, Dr. Baker made his first successful appliance, and since then he has had upwards of a hundred cases. This apparatus was made of hard rubber and had hinges to aid the levator muscles in bringing it up to the posterior pharyngeal wall. The patient was 12 years of age, and the operation of staphylorrhaphy had been performed unsuccessfully. The plate was made eight years ago, and some improvement in speech was noticed at once, and after training as to the proper way of using the lips and tongue there was much more and faster improvement.

In illustration Dr. Baker exhibited several plaster models with the appliances in position, as well as two patients, who showed a marked improvement in speech when wearing the appliance.

PROFESSOR BUTTERFIELD stated that he had been a teacher of persons afflicted with vocal defects for the last eighteen years, and that in connection with the various phases of stammering, stuttering, etc., he was brought into association with persons with defective palates. After the adjustment of a plate, some people will develop the best they can do instinctively and intuitively, while others will not adapt themselves to its use for a long time. A person with a musical mind will at once seize upon the vibrations of the voice and adapt them intuitively. The Professor believes there exists a condition, which may be called sound-deafness as compared to the term color-blindness, and thus it is that people learn so very differently. He then referred to Bell's visible speech, which consists of a system of phonic symbols, by means of which, one may learn to speak correctly, even unknown languages; he himself had been tested in thirty different languages. When a person with fissure of the pal-

ate has a plate introduced, he must learn what the ear never found in his own voice. It is only necessary to learn the proper position of the organs. It is much more difficult to learn to get a good quality of voice than to articulate, for this is dependent on the relative position of the cavities. It is most difficult to wake up a response in the anterior cavities of the nares. Unity of sound is due to vibrations in all of the cavities in unity.

DR. CHARLES B. PORTER said that he came forward, not as an opponent of the views that had been advanced, but because he believed that the time has come to review the subject of staphylorrhaphy, which now is so rarely performed. He wished to consider it from several standpoints.

1. Is the operation feasible and in what cases? Trelat says that the operation should be performed in any case unless the extent of the fissure is too great, unless there has been previous operation, or unless the parents object.

2. At what age? Many authorities were quoted, some giving the age as early as 14 months and others not until 16 years. Dr. Porter's own idea would be at the age when the child has sufficient teeth to support a diaphragm to keep the pressure of the tongue away from the wound.

3. The method of operation. This would be comparatively simple, *e. g.*, refreshing the edges; lifting away from the bone the mucous membrane with the periosteum by means of a periosteum elevator; and putting in stitches every quarter of an inch. The sutures may be of silk or of silver wire. Lateral incisions parallel to the line of union will relieve tension. A diaphragm should be inserted to protect the stitches from the tongue.

4. Subsequent training in the formation of the voice is the most important of all things and without it there can be no success.

Dr. Porter has operated upon two cases: one at 14 months which did well until about the sixth day, when the mother of the child gave it a hard crust of bread and the stitches were pulled out. The other case was aged 16 years. Nine sutures were introduced and these were protected by a gutta-percha diaphragm. This case did well and was exhibited. There was a great improvement in speech.

DR. J. COLLINS WARREN said that no operations for staphylorrhaphy were done previous to this century. In the early part of the century Rue began to do the operation. Later it was done by Dr. John Warren, Dr. Bigelow, Dr. Gay, Dr. Mason Warren and others. Dr. Mason Warren (the speaker's father) did a great many operations, having modified the method. The difficulty was in the retention of the soft parts, owing to the peculiar obliquity of the bony parts. Dr. Warren seized the uvula with a pair of long forceps and drew it firmly across the fissure, when the posterior pillars became tense. Then with a strong

pair of curved scissors he divided *all* of the tense tissues, whether muscles or not, after which it hung loose, and the same thing was then done on the other side. With the hard palate the difficulty was to bring the surfaces together. The edges were pared with a pointed, double-edge knife, and the mucous membrane was separated almost to the alveola process, after which it was united by sutures. Dr. Warren did about 100 operations. Later he did not attempt to unite the entire length of the fissure, believing that the chief essential is the restoration of the arch with enough soft palate for a valve.

Dr. Warren showed the case of instruments with which Dr. Mason Warren had performed all of his operations, upwards of 100 in number. The sutures he used were silk, which had been soaked in the compound tincture of benzoin, which was claimed by some to have antiseptic properties, but the chief advantage was that the knot would not slip.

DRS. EDWARD REYNOLDS and R. W. LOVETT reported

#### REMOVAL OF NASAL OBSTRUCTION. RESULTS IN 112 CASES.

DR. R. W. LOVETT said that the cases to be reported were the ordinary patients that presented themselves for treatment at the Dispensary during the three months' service of Dr. Reynolds and himself. Three conditions were chiefly observed:

- a. Chronic folliculitis.
- b. Congested mucous membrane with abundant secretion.
- c. A dry, shining mucous membrane.

In general the treatment employed involved the destruction of the mucous membrane of the turbinated bones by cauterization by means of chromic acid. In 75 cases this treatment was employed.

In 33 check cases, in which the conditions were as nearly identical as possible, the ordinary treatment by douches, etc., was recommended.

In 5 cases there were exostoses or deviations of the septum.

Of the 75 cases that were cauterized with chromic acid, 15 were cured; 38 were much improved; 2 were not benefited, as was ascertained after three months by mailing addressed postal cards with questions to be answered and returned. The remainder were not heard from.

Sixteen of the cases were cauterized but once, and the remainder, 21, three or four times according to the amount of hypertrophy. Only one nostril was treated at a time, and the second application, if necessary, was delayed about a week. Of the 33 check cases, which had conservative treatment, none received any benefit, as is usually the case with this class of patients. But two of these cases were burned, after about three months, with a cure for result. The exostoses were removed.

DR. EDWARD REYNOLDS said that the mucous membrane of the nose is for the purpose of tempering the air before it reaches the lungs. No matter what is the condition of the external air, it enters the lungs at a temperature of about 30° C. (86° F.), and saturated with moisture.

The turbinated bones divide the anterior nares into three main compartments, which are normally narrow spaces, and the mucous membrane which surrounds these spaces, is so nicely supplied with blood-vessels that it is almost an erectile tissue. A series of acute attacks may make a chronic swelling of the mucous membrane, and this may cause supplementary mouth-breathing which, in the later stages, may be substituted by mouth-breathing itself.

The operation, which was done at the Dispensary in the cases to which reference has been made, is simple, and but few instruments are necessary. A solution of cocaine (4 per cent.) is first applied to the nostril by means of a hand-spray, and then deliquesced crystals of chromic acid are applied to the whole of the lower turbinated bone (unless it is so large that it is thought wise to do only the inner half the first time), by means of cotton or an applicator made of a flattened piece of copper wire. If examined with a nasal speculum the eschar is at once seen.

If the other nostril needs attention the application is delayed from three days to a week, and if only one is affected we waited till the eschar came away before a second application, which was then made if necessary. The eschar caused by chromic acid is very superficial, and this is the great advantage of its use for this purpose. After the operation it is difficult or impossible to detect any scar.

DR. VINCENT Y. BOWDITCH said that he had used the chromic acid in treatment of this class of cases for over a year in his office practice, and that he found it of great advantage in clearing obstructions from the nose, which is the true respiratory organ. There are many enthusiasts who remove nasal hypertrophies for everything, and thus weaken the cause. Some even claim that asthma should be treated in this way.

DR. THOMAS A. DE BLOIS said that the nasal hypertrophies appear on both the anterior and the posterior ends of the turbinated bones. Those which are on the anterior ends are the ones which are benefited by the chromic acid treatment. In its application the doctor prefers to use a round rather than a flat probe, and he is accustomed to cauterize in lines only, by drawing the end of the probe over the surface where it is desired, and in this way it is regulated, so that the application can be stopped when enough has been destroyed.

The hypertrophies in the posterior nares are apt to be large, puffy masses, which may be removed entire with a snare, after which they shrink very much, those which have appeared as large as the thumb shrinking to the size of a pea.

DR. HENRY L. MORSE said that many of the cases which had been reported were sent to the throat department from the ear department of the Dispensary, because he believed that a free opening through the nose is very important in treatment of diseases of the ear. In the case of children nasal obstruction will increase the ingrowing of the drum of the ear, and the nose must be attended to, or else little can be gained for the ear. He has frequently observed that the Politzer douche has cleared the nose when the most thorough blowing would not succeed.

DR. GEORGE A. LELAND said that he had obtained good results from this method of treatment. There is a certain normal erectility to the mucous membrane of the nose, and hence it is not best to burn too much, lest the condition of dry catarrh follow. Dr. Bosworth, of New York, applies the chromic acid by fusing a bead on the end of a silver wire. Dr. Leland has found that the reduction of the mucous membrane of the turbinated bones has cured the condition known as "hay fever." He once saw a patient who had suffered for twenty-three successive years. Not having at hand the chromic acid, he curetted the mucous membrane from the turbinated bone. It was followed by much bleeding, but there was no "hay fever" that year nor since, and it was done four years ago. The inferior passage has been called a continuation of the Eustachian tube.

DR. REYNOLDS showed a number of skulls that had been cut in such a way as to illustrate the swelling of the mucous membrane, the exostoses, and the deviations of the septum.

DR. PORTER exhibited a beautiful specimen of surgical kidney following a stricture of ten years' duration. The urinary apparatus had been dissected out entire, and showed the stricture of the urethra, the bladder with its thickened and hemorrhagic mucous membrane, the dilated ureters, and the enlarged kidneys, consisting chiefly of dilated pelves and calices, the cortices being nearly all destroyed.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*Does the Yellow Fever Germ Disappear?—Alleged Malarial Complication of the Florida Epidemic—Gibier's Report to the New York Academy of Medicine—Unusual Methods of Acquiring Syphilis—Hospital Sunday Collections—Officers Elected.*

Dr. Paul Gibier has just presented the report of his experimental researches in yellow fever, made recently in Florida, under the direction of the French Government, to the New York Academy of Medicine, and it is to be noticed that in this

report he reasserts his claim to have discovered the microbe of the disease in the intestinal canal. The occasion was an interesting one at the Academy, and the paper was listened to with the closest attention, but, strange to say, there was not, with the exception of the President, Dr. A. Jacobi, a single pathologist of note present, and there was not a word of discussion upon it.

Dr. Gibier stated that when he reached Jacksonville the epidemic had already begun to diminish, but, through the courtesy of Surgeon-General Hamilton and Dr. Porter, Chief of the Bureau of Medical Relief, he was enabled to examine as thoroughly as possible several of the subjects there.

Before presenting the details of the cases he observed he said that he thought it well to take up the question whether the recent outbreak in Florida was veritable yellow fever or not, since the relatively small number of deaths and the fact there were proportionally more cases among the blacks than the whites had caused some physicians to entertain doubts in regard to its true nature. As to the prevalence of the disease among the blacks, yellow fever had been observed among them, as well as the white population, in previous epidemics in the United States. Moreover, in Jacksonville most of the white families left the town a few days after the outbreak of the epidemic, leaving few but negroes remaining. Still, it was remarked that as a general rule the symptoms were less grave and the mortality less considerable among the latter than among the whites. He believed it was necessary, therefore, to examine, *first*, whether it was really yellow fever that had prevailed at Jacksonville; *second*, in case of a negative reply, whether it was a new disease; *third*, whether all the cases registered were genuine (in other words, if there were not existing at that time several kinds of fevers, such as dengue, bilious or malarial fevers); and, *fourth*, whether yellow fever might not have assumed, at least in a certain proportion of cases, a kind of typhoid character, owing to the malarial nature of the country.

In answer he was able to say that many cases of genuine yellow fever were observed, and that he personally saw some cases which were absolutely characteristic, judged both by the symptoms and anatomo-pathological lesions; but at the same time he thought that it was not irrational to admit that a large number of cases of bilious and malarial fevers existed simultaneously. In illustration, he referred to the case of a negro upon whom he made an autopsy at St. Luke's Hospital, Jacksonville, where the bowels were normal, the liver black, instead of presenting the characteristic color, and the spleen hypertrophied; so that whatever else the patient may have had, he certainly did not have yellow fever. At the temporary hospital Dr. Solace Mitchell showed him the ther-



metabolic charts of his patients, and it was noticeable from the intermittent form assumed by the fever, that the paludial element had stamped, as it were, its mark upon it, and made it assume one of those hybrid forms to which Prof. Verneuil, of Paris, had called attention. It was likely, he thought, that the cases in which the diagnosis was doubtful were found, not in the center of the town, but in the suburbs and on the opposite bank of the St. John's River (South Jacksonville) where the sanitary conditions are highly favorable to the fostering of malarial fermentations. The case of the negro referred to occurred across the river, and it was, as he believed, of the nature of pernicious fever.

As to his bacterial observations, Dr. Gibier said that while the cases were few in number the results entirely confirmed the more numerous ones made by him in Havana during 1877 and 1878. Having given a description of his technique, a special feature of which is the use of a curette which is plunged into the parenchyma of the viscera to be examined, he proceeded to give an outline of the observations which he made on individual cases. The specimens taken from the first two became altered after death, owing to a delay of eight days in receiving his instruments. They presented, however, the characteristic lesions of yellow fever. In the third case the intestines did not contain the bacillus which he stated that he had found in such large quantity in cases at Havana; and, commenting on this circumstance, he said that if this bacillus was really the cause of yellow fever, we must admit that under influences as yet unknown it might disappear after having produced the special intoxication; the same thing being observed to a large extent in the case of the comma bacillus of Koch in Asiatic cholera. As in his former observations, the blood did not contain any microbe, and he added that never in a single instance did the microscopical examination of the blood, either in its fresh state or in various preparations, ever show anything abnormal.

As regards the different microorganisms which developed in the cultures of the viscera, the number of the colonies was so small, and their composition so various, he said it had to be admitted that an accidental infection took place during the manipulations; but with the cultures of solid media there was no reason to fear the same errors as with the liquids. Although he admitted the possibility of the introduction of microorganisms into the viscera, owing to the alterations of the mucous membrane, he considered the cultures of the liver, spleen and kidneys in this instance as having remained sterile.

In case No. 4 he considered it very doubtful whether the patient died of yellow fever, and it is unnecessary here to detail the description of the autopsy and the results of his cultures. In the

fifth case, a negro woman, the stomach and bowels contained a large quantity of black liquid, acid in the stomach, but decidedly alkaline in the small intestines, and neutral in the large. The kidneys, spleen and liver contained a certain number of diplococci, the colonies of which spread quickly over the surface of the agar-agar, like a transparent cloud, and discolored the gelatine very rapidly. This was the first time that Dr. Gibier had found this microorganism, and it was also the first time that he ever found a microbe in the parenchyma of subjects dead of yellow fever; but in this connection he called attention to the fact that the autopsy was made eight hours after death, in a surrounding temperature relatively high, and while the interior of the subject was still warm: all conditions very favorable to the growth of the bacteria of decomposition. Some particles of the contents of the bowels, taken from different portions of the track were diluted with sterilized water, and with them he made cultures on gelatine in his matrasses. Notwithstanding the large dilution, the colonies were so numerous that after twenty hours the gelatine was entirely dissolved in the first two matrasses. In the third (fourth dilution), in 106 colonies he counted 98 which liquefied the gelatine. The important point to which he desired to call especial attention, was the fact that all these liquefying colonies were formed by the microbe which he had isolated at Havana.

In the sixth case observed, a typical one of yellow fever in a white male, *æt.* 40 years, the cultures of the blood and the renal, splenic and hepatic pulps remained absolutely sterile. Cultures of the urine contained some micrococci; but the patient had been catheterized several times during his illness. The cultures of the contents of the bowels presented only common microbes. While this was unquestionably a case of yellow fever, the conclusion he reached was that the pathogenic bacilli had disappeared from the intestines by the time death supervened.

Case No. 7 was the one previously referred to, in which the patient was believed to have died of yellow fever. The negro lived in the swampy locality of South Jacksonville, and death occurred only twenty-four hours after the initial chill, which was very violent and followed by a very high fever. In this case while the cultures of the blood, kidneys, spleen and liver remained sterile, those of the intestinal contents were strewn with colonies almost exclusively composed of large and long bacilli, which did not dissolve the gelatine. Dr. Gibier remarked that he was unable at present to say what was the significance of these long bacilli, which grow at the surface of the plates, with the aspect of a light pellicle more or less irregular, and in the interior of the medium of culture were regularly spheroidal. He reported the fact only, with the hope

that it might perhaps be of service in guiding some further researches.

He considered it a remarkable circumstance that out of the three undoubted cases of yellow fever in the above series, it was the one in which death was most rapid (occurring after four days), that contained the black and characteristic matter in the intestines and presented in such an extraordinary abundance, and almost exclusively, the same bacillus which he had seen in several yellow fever subjects in Havana, and which Dr. George Sternberg also found in these cases of yellow fever in which he looked for it. The cultures of this bacillus, he said, exhaled an odor quite similar to that which he had remarked several times in black vomit. Furthermore, biological characteristics of the microbe were entirely in accord with the physiology of yellow fever itself, and in certain conditions, as previously shown by him, it blackened bodies in contact with it to such an extent that some of the liquid cultures certainly had the appearance of black vomit. He did not claim, however, that this last character, which did not always appear, was pathognomonic.

On the whole, he thought that he was correct in saying that the presumption that this bacillus was the cause of yellow fever was tending to become a certainty. The fact that in the case in which the autopsy was made early after death, both at Havana and Jacksonville, the blood, liver, spleen and kidneys, had been constantly found free from microbes, added support, he claimed, to the theory which he had advocated, that yellow fever is an intestinal infection, which must be treated from the very beginning with evacuants and disinfectants such as bichloride of mercury, naphthaline and tannic acid.

Two objections have to be answered, viz.: 1. How is it that the microbe supposed to be pathognomonic is not found in every case of yellow fever after death; and if it has disappeared, how shall we explain the persistence and the aggravation of the accidents? 2. If yellow fever is a disease the germ of which grows exclusively in the intestine, how shall we explain the albuminuria present?

In reply he said that it was known that when a microorganism had saturated any medium, its growth ceased, and that if another microbe was introduced and grew in the medium transformed in that way, the first often disappeared. This would explain the possibility of the disappearance at any moment of the microbe of yellow fever. He proposed at the first opportunity that he could get to analyze the dejections of several patients from the first day to the last, and he said he should not be surprised to find his microbe only in the first period of the disease, at least in a certain number of the cases. As to the persistence and eventual aggravation of the accidents, they very likely depended on the more or less

grave importance of the lesions. The latter were due to venomous products, ptomaines, secreted by the microbes and absorbed by the blood-vessels of the intestine, and more especially by the radicles of the vena porta. We know that the cultures showed the absence of bacteria in the liver. This gland, into which the blood of the vena porta first flowed, underwent, nevertheless, a fatty degeneration, analogous to that observed in certain cases of poisoning *per ingesta*. The spleen, on the contrary, was of normal appearance, unless there was a malarial complication or secondary infection. If the kidneys were congested and allowed the escape of albumen, it did not follow that they were directly attacked by the bacteria. In typhoid fever, for instance, which might be considered as an infection primarily intestinal, albuminuria was observed without there being found in the urine, at least in the beginning, the specific bacillus of the disease. Certain kinds of poisons also produced albuminuria, such as lead, phosphorus, cantharides, etc.

In conclusion, he stated that the experiments which he had made on his bacillus had already given the explanation of the fact that yellow fever remains endemically on the seashore of the hot countries, and not in the interior regions; and also of the fact that an infected vessel may hibernate in glacial regions without losing the ability to communicate yellow fever when she returns to a hot climate. Other experiments, which he intended to publish later, had induced him to think that if the bacillus in question was really the cause of yellow fever, it would not be impossible to protect against the terrible disease the populations of countries exposed to epidemics of it.

At the conclusion of Dr. Gibier's paper Dr. L. Duncan Bulkley read one on *Unusual Methods of Acquiring Syphilis, with Reports of Cases*. He desired to call attention, he said, to the fact that not infrequently syphilis was acquired by means not only entirely innocent on the part of the sufferer, but which were also quite unexpected; and his object was to put the profession and the community on their guard against this unseen danger, to remove to some extent the odium commonly associated with the disease, since it was so frequently entirely undeserved, and to endeavor to create a public opinion that would before long insist on placing syphilis where it belonged, among the infectious diseases, so that it might be brought under the careful surveillance of the public authorities.

In the paper were recorded no less than seventy-five cases of extra-genital chancre, the largest number ever reported by any American observer, and he believed that the relative frequency of the contraction of syphilis otherwise than by sexual intercourse was by no means sufficiently appreciated. The innocent transmission of the disease, he said, had given rise to dozens of epidemics in

the past, and many thousands of cases in which it had occurred had now been recorded. It was somewhat startling to learn that Fournier had recently made the statement that in about 25 per cent. of all the cases of syphilis in females which came under his observation the disease was innocently and undeservedly acquired. Yet this experience was corroborated by that of Ricord, and Dr. Bulkley said that in his own private practice this class of cases amounted to as much as 40 per cent.

Of his 65 cases of extra-genital chancre, 34 were in males and 31 in females. In 30 the chancre was on the lips, in 7 on the fingers, in 6 on the breasts, in 6 on the tonsils, in 5 on the tongue, in 3 on the cheek, in 2 on the chin, and in 1 each on the nose, eyelid, ear, hand, forearm and sacral region. He has divided the unusual methods of acquiring syphilis into three main groups as follows: 1, syphilis economica; 2, syphilis brephotrophica; and 3, syphilis technica. The first, *syphilis economica*, he said, was acquired in the ordinary occupations of life, and it in turn was divided into three main groups, viz.: 1, domestic transmission; 2, industrial transmission; and 3, personal transmission. Many cases had been recorded in which the disease was contracted from knives, forks, spoons, drinking-cups, etc. A very common method was by means of tobacco pipes smoked by different persons in succession, and one such case occurring in his own experience he related. Cigars are also a common source of infection, and he said that some time ago he had reported two well authenticated cases of this kind occurring in physicians. More recently he had met with a third case, in which, however, the history was less certain. Various articles of personal apparel have been known to convey the disease, and he gave an interesting account of a case of his own in which it was contracted from a bathing-suit. In this instance, in which the disease was situated in the sacral region, there could be no question that the suit was infected with virus derived from mucous patches on the person of some previous wearer.

Bedding, toilet articles, opera-glasses and canes, he said, had all been known to convey the infection, and the next case that he related from his clinical experience was one in which the chancre was situated on the tongue and was contracted from pins placed in the mouth. One physician had told him of a case in which caustic used on a syphilitic sore had carried the poison, the virus probably adhering to the caustic holder. Dr. Bulkley said that he had never been able to hear of a single instance in which the disease was contracted from privy seats or urinals, popularly supposed to be such a common source of infection.

The second group of *syphilis economica* embraces all cases of industrial transmission during or by means of various trade occupations. Glass-blow-

ers' syphilis is one of the most common instances of this, and he has collected 162 cases of it. Assayers and goldsmiths are also liable to become infected through their occupations, and musicians from their instruments. Tacks, pins and coin have been known to convey the poison, but no case is as yet on record in which it has been alleged that the disease has been contracted from paper money or from postage stamps. Dr. Bulkley said that laundresses were commonly supposed to be peculiarly liable to infection from the clothing of syphilitic subjects, but in reality this was not the case, since the fact that the hands were so constantly in warm water rendered absorption difficult.

In the third group is classed personal transmission by kissing, biting, etc., and next to the venereal act kissing is at the present day the most frequent cause of syphilitic infection. In this way children become infected by their parents and young women by their lovers, and he related an instance in which syphilis was given by the same man to two ladies to whom he was successively engaged. Biting and tooth-wounds also sometimes convey the virus of syphilis, and one case is on record in which it was purposely transmitted in this way from spite. Other sources of infection that might be mentioned, he said, were scratching, pinching and innocent contact with syphilitic patients in bed or while carrying such patients.

In the second class, *syphilis brephotrophica*, Dr. Bulkley makes two groups, viz.: transmission from the nutrition of infants, and transmission from general attendance upon infants. In a village in France no less than forty cases of syphilis were once traced to a single child. Articles used in the hand-feeding of infants, and in the general care of infants' articles and in the nursery toilet, combs, napkins, etc., may be the means of infection, while the disease is sometimes transmitted through scratches and tooth-wounds by infants.

*Syphilis technica* is that which arises from body-service by physicians, nurses and attendants. It comprises a large number of sub-groups, but the principal are the following: 1, where the operator is the victim; 2, where the operator is the syphilofer; and 3, where the operator is the medium. There are almost numberless instances on record in which the physician has contracted the disease from a syphilitic patient. It is sometimes acquired during operations and sometimes in dissecting; while not infrequently students become infected through manipulative procedures. The largest proportion of cases is among accoucheurs and midwives. In one case that came under Dr. Bulkley's observation a lady contracted a chancre on the finger from dressing the eye of a relative affected with syphilitic disease. Many instances are known in which chancres on the eyelids, nostrils and lips have been caused by carrying the soiled fingers to these parts; and physicians some-

times contract the disease from syphilitic patients coughing in their faces, or while engaged in practicing artificial respiration on newborn infants.

The second group, where the operator is the syphilofer, is a very large one. Here the operator communicates his own syphilis in performing some body-service; and some years ago, in Russia, a female quack infected quite a large number of individuals with the disease while engaged in removing foreign bodies from the eye with the tip of the tongue. Dr. Bulkley said it was also a fact that two similar cases had been reported in this country.

In the third group of cases the operator is the medium, carrying the poison from one patient to another. Instances of this are well known in connection with vaccination, circumcision, transplantation of teeth, wet-cupping, and minor operations. Dental instruments sometimes convey syphilitic virus, and he said he knew of three cases in which this was done through the agency of razor wounds. Twenty-five observers have reported cases of syphilis originating from Eustachian catheterization, and about sixty such cases have been attributed to a certain ear specialist in Paris.

It could, therefore, readily be seen, Dr. Bulkley said in conclusion, that syphilis was a frequent source of unseen danger, and that it was by no means always a venereal affection. As we learned more of the disease it became more and more probable that it was much more common than was generally supposed. The only wonder, however, considering the varied sources of infection, was that the cases were not more frequent than they really were. The prevention of this great evil claimed, consequently, the best thought of the community and the profession.

The total amount raised from this season's hospital collection up to the date of the annual meeting of the Hospital Saturday and Sunday Association, January 21, was \$40,345. On this occasion the General Agent of the Association stated that the final amount of the collection would be larger than that of last year, which was about \$50,000, and that it would probably reach nearly \$52,000.

At the annual election of the New York County Medical Association the following officers were elected for the ensuing year: President, Dr. Charles S. Wood; Vice President, Dr. George Tucker Harrison; Recording Secretary, Dr. P. Brynberg Porter; Corresponding and Statistical Secretary, Dr. Augustus D. Ruggles; Treasurer, Dr. John H. Hinton; Member of the Executive Committee, Dr. S. B. Wylie McLeod.

P. B. P.

THE meeting of the American Medical Association at Newport, R. I., promises to be the best in its results, and to have the largest attendance of any yet held.

## LETTERS.

Medical gentlemen writing to the Editor of THE JOURNAL will please conform to the rule requiring MS. to be written on one side of the paper, to take pains to write the names of persons and places legibly, and to send their own names as a guarantee of good faith. In changing address subscribers will please give old address.

### Pneumonia from Contusion? Is there a Lung Concussion?

*To the Editor:*—Can we have a pneumonia caused by an injury to the chest-wall, presenting the physical signs of that malady, with few, if any, of its rational or constitutional signs? If so, how can we account for the absence of its commonly attendant symptoms? These questions are suggested by a case which recently occurred in the practice of my friend, Dr. John Vander Laan, of this city, through whose courtesy I am permitted to give the following history:

G. G., a Hollander, æt. 45, of good habits and excellent health, while working on a pile driver, June 23, last, fell with the tower to the ground, a distance of about eighteen feet. He struck on his feet, but losing his balance fell on his right side against a pile of lumber. He was carried home unconscious. His physician saw him about two hours after, when he had fully regained consciousness. No external signs of injury could be detected. He complained of pain along the spine, from the cervical to the sacral region; over the right hypochondrium, and the epigastrium. There was numbness and tingling of the feet and legs. Aside from this, the general sensations were normal. There was no vomiting, no hæmoptysis, no pain except in the right side on deep inspiration. Pulse was 110; respiration 24; some evidences of shock. Auscultation and percussion revealed nothing. Left pupil was somewhat dilated. He rallied under appropriate treatment so that on the 24th he was quite comfortable. The pulse was still rapid and wanting in volume and tone. The temperature was normal. The pain in the right hypochondrium persisted, and the patient complained of epigastric distress. Pulse still rapid; respiration same as on day before, but more shallow. Movement of right side less free on account of pain. Negative results from auscultation and percussion.

On the 25th, the second day after the accident, the temperature rose to 101° F. The other symptoms remained the same. Bowels moved by aid of a laxative. The patient felt so well it was not necessary to call next day. He continued to improve, so that on the 27th he was told no more calls would be made until sent for. Examination at this time showed the left pupil still dilated; pulse 90; respiration 22; temperature 99°. The appetite was improved. Bowels moved normally. There was free perspiration. The limbs were warm, could be moved with comfort, but were still somewhat numb. There was some

epigastric tenderness and pain in right side on movement. There was no cough; no expectoration. Negative results from auscultation and percussion. Improvement continued until the afternoon of June 30, when the patient began to complain of dyspnoea and epigastric distress. He was seen again on the morning of July 1, when it was found that there had been a consolidation of the base of the left lung posteriorly. There was dulness over the region; bronchial breathing; crepitant râles. No cough or expectoration. Pulse 110; temperature 100°; respiration 26. There was profuse sweating and extreme thirst. No trouble could be discovered in the right side. Heart sounds more normal. Pupil still dilated. On the 2d, the left side was found to be clearing up, but examination of the right side revealed dulness over the lower two-thirds posteriorly, together with bronchial breathing and crepitant râles. The temperature was normal; pulse 120, weak and lacking in volume. Heart sounds were normal but labored. Cough and expectoration were still absent. On the 3d, percussion elicited dulness over the entire right lung with bronchial breathing, but no râles. The temperature was 98°; respiration 34; appetite was lost. There was great thirst, and the patient complained of being excessively hot when the extremities were cold to the touch. There was a slight hacking from time to time, as if clearing of the throat. The patient suffered no pain. The heart's action was labored. On the 4th and 5th, the symptoms continued about the same, except perhaps more marked. There was a growing loss of power in the heart's action. Pulse 130, regular and weak; temperature 97.5°. On the 6th, the radial pulse could with difficulty be detected. There was intense dyspnoea. The extremities became still more cold to the touch, though the patient could scarcely tolerate any covering over them. He complained of excessive warmth. Physical signs were the same, except the presence of a few moist râles at the base of the left lung. The apex beat seemed crowded about two inches and a half to the left. July 7, an aspiration needle was introduced into the right side, but failed to discover any fluid. I saw the patient with Dr. Vander Laan on the afternoon of this day. He was evidently at that time *in extremis*. The extremities were cold and pulseless. He was cyanosed. Breathing was labored and shallow. The heart was weak; the second sound almost wholly lost. There seemed complete consolidation of the right lung with some congestion of the base of the left. The mind was clear, and had been from the first. There was still dilatation of the left pupil. The patient had scarcely slept since the accident. He died that evening. Unfortunately an autopsy was not allowed.

This case has seemed to me a particularly in-

teresting one, and as having some bearing on the question of the local or constitutional nature of pneumonia, if it be a pneumonia, as its physical signs would seem to have it. Loomis, arguing for the constitutional nature of the disease, claims that a traumatism never produces a lobar pneumonia. It is to be regretted that a post-mortem examination could not be had in this case, but if physical signs alone can be relied on, we had here a pathological condition of the lung similar to that existing in that malady, and it seems to me a case in point of lobar pneumonia of traumatic origin. The nervous pneumonia observed throughout would seem to indicate that the force of the injury was spent upon the cerebro-spinal system. It is a well-known fact that hepatization of the lung may be produced by section of the vagus. Why may we not attribute the consolidation in this case to a lesion of the pneumogastric? If the engorgement was caused in this instance by a deranged vagus, why not in every case, the chill and fever depending entirely upon the extent to which the same causes influence the heat centre of the brain?

FRANK W. GARBER, B.S., M.D.

Muskegon, Mich.

#### The Minnesota Medical Act.

*To the Editor:*—In response to the suggestions of many of the profession, permit me to submit to your journal a brief résumé of the work accomplished by the State Board of Medical Examiners of Minnesota in the brief period of their existence, working under the provisions of the present State Medical Practice Act. These statistics are presented trusting they may direct the attention of the profession anew to the benefit to be derived by both the public and profession by efficient medical legislation, and trusting it may further stimulate the profession in securing, at the hands of the respective legislatures, now in session, such legislation as is required to protect both the public and profession. The present Act regulating the practice of medicine in Minnesota, became operative, July 1, 1887, and succeeded the old Act that had been in successful operation for a period of four and a-half years. The old Act was a verbatim copy of the present Illinois Act, excepting that the exemption clause was five years instead of ten, which is the period of exemption of the Illinois Act. Through the operations of the old Act the profession of the State had experienced some of the benefits of medical legislation, and was therefore disposed to aid and support the present Act in every way possible. The Minnesota Act has been enforced in a quiet, conscientious and determined manner by a board composed of the leading representative men of the profession of the State. The Act has received no mention by the medical press of the country, not-

withstanding it is the best Act of any State and is as ably enforced as any of the various State Medical Acts. The present board have held seven quarterly meetings, at which eighty-six physicians have applied to be examined. Of this number six were refused admission to the class, not having taken three full courses of medical lectures of six months duration each. Of the eighty entering the various examinations fifty-one were licensed. Some of this number underwent several quarterly examinations before being successful. Twenty-nine were rejected, not possessing the knowledge of Medicine required by the board. Of those who passed, forty-nine are Regulars and two Homœopaths. Of those failing to pass the examination, eighteen were Regulars, eight were Homœopathic, and only three were eclectic physicians. Those passing the examinations of the board were mostly graduates of McGill, Harvard, Chicago Medical, and the University of Michigan. Students who were graduates of the two-term schools and those having sessions of less than six months duration, are of course prohibited the privilege of practice in the State.

PERRY H. MILLARD, M.D.

St. Paul, Minn.

#### A Needle in the Heart.

*To the Editor:*—Noticing the article in the last JOURNAL, by Sara A. Kime, M.D., "The Migration of a Needle," calls to my mind a case that came under my own observation about twenty-eight years ago, in the village of Warsaw, Western New York, where I was then practicing.

I was called to attend Mr. T., æt. 20 years, who for many weeks had been suffering severe pain in the region of the heart, attended with violent palpitation upon making any considerable exertion. Not a moment passed, unless he was asleep, that he was not tormented with an indescribably oppressed feeling about the chest. The pulse was somewhat accelerated and irregular. I had the clothing removed from the chest, so that I could make a thorough examination by inspection, as well as by auscultation and percussion, and while passing my hand over the heart to ascertain the force of its impulse, I felt a little hardened elevation. It was not visible when looking at the chest, but it could be readily felt with the finger, or the flat surface of the hand pressed gently upon it, and moved upwards and downwards.

With a bistoury I incised the skin directly over it, and with a pair of forceps removed an ordinary sewing needle an inch and a-half in length. All the unpleasant symptoms very soon subsided, and in a week or two my patient was quite as well as he had ever been.

From the location of the needle, and the attend-

ing symptoms, I was quite sure it had, for a time, found a resting place in the very substance of the heart itself.

JOHN G. MEACHEM, M.D.

734 College Ave., Racine, Wis.

#### BOOK NOTICES.

A CLINICAL ATLAS OF VENEREAL AND SKIN DISEASES, INCLUDING DIAGNOSIS, PROGNOSIS AND TREATMENT. By ROBERT W. TAYLOR, A.M., M.D., Surgeon to Charity Hospital, New York, etc., etc. Philadelphia: Lea Brothers & Co. 1888. In eight parts. Price per part \$2.50.

We have received the first four parts of this handsome work, which is published in a manner highly creditable to the well-known house of Lea Brothers & Co. The lithographs are executed by the Sinclairs, and it is needless to say are in the highest style of the art. The paper is superb, and the typography is exquisite.

There is no formal preface and the author commences part I by plunging directly into his subject. The publishers, however, have supplied a detached "prefatory note" in which they say:

"As no clinic, however large, can furnish the necessary materials, the entire literature of the subjects has been searched for its best illustrations, and selections made with proper permission of living authors. These have been completed by numerous reproductions from a collection of original paintings from life, gathered by the Author during many years of practice."

The well-known views of Dr. Taylor on venereal diseases are set forth on these stately pages in a pleasant and straightforward manner; but there is one blemish in the first parts that we would gladly pass over, except that our duty to our readers requires that book notices in these columns shall be impartial and accurate. This blemish is the frequent occurrence of such phrases as this, on page 167: "For further particulars as to the use of preparations of iodine, see Bumstead and Taylor, page 875"—and again on the same page, "For full particulars of the method of using inunctions see Bumstead and Taylor on venereal diseases, page. 861." These remarks seem to imply that the Atlas is intended as a companion to the work of Bumstead and Taylor, whereas, in fact it is intended to be, and really is, complete in itself.

The author of the atlas surely could not have intended to depreciate this later work, and we only regret that such a magnificent work should not contain all the author thinks the text requires to fully declare his meaning.

Dr. Taylor is extremely cautious in his prognoses, and his candor is commendable; thus in speaking of the etiology of acne simplex, he says: "The pivotal questions are, what causes the inflammation that precedes the formation of the plug?



And why is it so prone to appear at certain times of life? . . . when we know really so little it may seem unkind to taunt with ignorance those who think they know it all, but it will certainly be conceded by scientific men that such statements as, 'certain conditions may be justly charged' et cet., 'the relation is especially intimate,' 'such and such symptoms are not infrequent in those suffering from acne,' et cet., are really the barest platitudes."

The author is a safe guide to follow, and he has produced a work that is of lasting value. Pathological theories may indeed change, and the text require many modifications through the changes of time, but these faithful reproductions of conditions actually observed, will be accurate so long as human frailty exists, and its consequences are visited on the human species.

LECTURES TO PRACTITIONERS ON THE DISEASES OF THE KIDNEY AMENABLE TO SURGICAL TREATMENT. By DAVID NEWMAN, M.D., Surgeon to the Western Infirmary; Pathologist to and Lecturer on Pathology at the Glasgow Royal Infirmary, etc., etc. 8vo, cloth, pp. 472. London: Longmans, Green & Co. 1888. Chicago: A. C. McClurg & Co. Price, \$5.50.

In these days of bold surgery this book is a very timely one. The author everywhere shows his thoroughly practical grasp of his subject, and if a perusal of its pages serves to cool the ardor of persons fond of operating, it at the same time gives good and sufficient reasons for the performance of certain operations and gives in detail the result of the author's observations.

The scope of the work is more extended than would be considered possible at first sight. It includes a discussion of the normal kidney and its relationships; malpositions; movable kidney; and floating kidney; and while the distinction is made clear between them, the author thinks it impossible to distinguish the movable from the floating kidney by physical examination. The general symptomatology of kidney disease is discussed in the second lecture, and then follow lectures on hydronephrosis, cystic disease, suppurative diseases of the kidney, infective new formations, injuries of the kidney and ureter, tumors and operations.

In regard to catheterization of the ureters the author says:

"To perform such a delicate operation by the sensation of touch alone is very difficult, and it is only by patient and prolonged practice on the dead subject that one can hope to succeed in performing the operation on the living, but once the art has been mastered it is easier to pass a catheter into the living ureter than a dead one. This may be done with or without the electric light. Early in 1883 I devised and used an electric endoscope and ureter catheters, and found that, when the bladder is well illuminated, the orifices of the ureters are easily seen as narrow, oblique, slit-like openings, about 2 inches apart

from one another. These openings are situated at the posterior angles of the trigon, nearly  $1\frac{1}{4}$  inches from the inner orifice of the urethra, and are united by a curved elevation which, however, extends a little beyond them."

The author uses this combined endoscope and catheter, but admits that where the bladder wall has become greatly changed from disease, the operation is unreliable and unsatisfactory.

The book is well printed and is a very valuable addition to the library of the general practitioner as well as of the general surgeon, while for those practicing bladder and kidney surgery it is indispensable.

## MISCELLANY.

THE BRITISH AND THE AMERICAN MEDICAL ASSOCIATION.—In an editorial, on the British Medical Association, in the *British Medical Journal*, of December 8, 1888, Mr. Hart calls attention to the fact that nearly one thousand new members have been enrolled during the past year, which means an increase of that many subscribers to the Association Journal, which has now reached the very handsome figure of fifteen thousand.

With more than sixty thousand regular physicians practicing in the United States, we should at least have for our own Association Journal as large, if not a larger circulation, than Mr. Hart has been able to secure for the *British Medical Journal*.

The financial condition of the British Medical Association may readily be appreciated from an examination of the balance sheet showing thirty-one thousand pounds sterling surplus in the Treasury. Notwithstanding the fact that many items of considerable expenditure were incurred the last year, embracing such items as the moving into the handsome new building on the Strand, the annual dues of members of the British Medical Association, which includes a copy of the Association Journal, are the same as in the American Medical Association. This Journal instead of being an incubus is, in fact, a source of handsome profit.

It is, therefore, plain that by good management of the affairs of our own National body, we shall soon be able to have our own building and printing presses for the publication of the Association Journal, and a handsome equipment for increasing the usefulness of the Association itself. There is now in the minds of many of the best men in the two countries, a sort of fraternal spirit of rivalry which may be noticed in all the Presidential addresses, in the reports of all the foreign delegations, and in the editorials of the official organs of the two great National bodies.—*Progress*, Jan., 1889.

The American Medical Association is a great National medical organization, and should have a permanent "habitat" in the city of the Capitol of the Nation. There the Association already has its library. There National aid could be secured for the erection of a permanent home for the library, for THE JOURNAL, and for the biennial meetings of the Association, as at present required by the by-laws.

Whether it is a wise provision to hold each alternate meeting in Washington appears to be a question admitting of some doubt in the minds of the members, as the law enacted by them appears not to be observed. Regardless of this, however, we believe frequent meetings in Washington would give great satisfaction, and permanent headquarters there would serve to give tone to and encourage enthusiasm in forwarding the growth and maintaining the influence of the American Medical Association.—*Memphis Medical Monthly*, Jan., 1889.

**DURATION OF INCUBATION AND CONTAGIOUSNESS.**—The Clinical Society of London have issued the following circular :

*Sir*.—Ten years ago the Clinical Society of London appointed a Committee to investigate the periods of incubation and of contagiousness of the commoner communicable diseases.

A certain amount of valuable material was received, but it was thought desirable to defer the presentation of a report until further experience was available. The Society has now determined to gather additional information with a view to the preparation of an early report on the subject, and for this purpose has reconstructed the Committee.

The Committee is desirous of obtaining particulars of cases which throw light upon the periods of incubation and contagiousness of the below-mentioned diseases, and will be grateful for notes of any cases where the facts can be ascertained with sufficient precision to afford grounds for conclusions.

It is thought that gentlemen practicing at a distance from large centers of population, and especially those engaged in the Public Health Service, or associated with schools, would be able to supply information of the kind required. A single case in which the dates of exposure to infection and the appearance of the first symptom can be accurately fixed, especially where the exposure has been limited in duration, would be highly valued.

The following diseases are included within the scope of the inquiry :

Variola.	Typhus.	Cholera.
Varicella.	Relapsing Fever.	Erysipelas.
Measles.	Whooping-cough.	Mumps.
German Measles.	Diphtheria.	Infectious Sore
Scarlet Fever.	Enteric Fever.	Throat.

The Committee consists of Dr. W. H. Broadbent, Dr. George Buchanan, Dr. Cayley, Dr. Thomas Barlow, Dr. Alfred Hill, Dr. Isambard Owen, Dr. Thorne Thorne, Dr. Alder Smith, and Mr. R. W. Parker, with Mr. Shirley Murphy, 41 Queen Anne St., and Dr. Dawson Williams, 25 Old Burlington St., W., as Honorary Secretaries, to one of whom communications should be addressed.

I am, etc.,

W. H. BROADBENT.

Clinical Society of London, Ch'mn of Committee.  
January, 1888.

#### PAMPHLETS RECEIVED.

Cochran, Jerome, M.D., State Health Officer of Alabama. *Problems in Regard to Yellow Fever and the Prevention of Yellow Fever Epidemics.* Reprint from Trans. Am. Public Health Association. 1888.

Wimmer, Sebastian J., M.A., M.D., St. Mary's, Florida. *Improprieties of Dress an Important Etiological Factor in Many Diseases Peculiar to Women.* Reprint from Med. Reg. 1888.

Busey, Samuel C., M.D., Washington, D.C. *The Wrong of Craniotomy upon the Living Fœtus.* Reprint from Am. Jour. Obstetrics. 1889.

Reed, R. Harvey, M.D., Mansfield, O. *Proceedings of the Fifth Annual Meeting of the Ohio State Sanitary Association.* 1888.

Dana, Charles L., A.M., M.D., New York. *The Cortical Localization of the Cutaneous Sensations.* Reprint from the Journal of Nervous and Mental Diseases. October, 1888.

Bailey, Steele, M.D., Stanford, Ky. *Minutes Kentucky State Medical Society,* July 11-13, 1888.

Taylor, Gov. Robert L., of Tennessee. *Message to the Forty-sixth General Assembly.* 1889.

Rutherford, R., M.D., Houston, Tex. *Report of Texas Quarantine for 1887-8.* 1889.

Gehring, Eugene C., M.D., St. Louis. *Electrolysis; Its Value in Diagnosis as well as in Treatment of Intra-*

*Abdominal and Intra-Pelvic Tumors by the Aid of a New Instrument.* Reprint from Amer. Jour. Obst., etc. August, 1888.

#### LETTERS RECEIVED.

J. Walter Thompson, New York; R. W. Gardner, New York; Jerome Kidder Mfg. Co., New York; Thos. Leeming & Co., New York; J. P. Crawford, M.D., Davenport, Ia.; J. R. Browne, M.D., Mottville, N. Y.; C. B. Kibler, M.D., Corry, Pa.; H. C. Markham, M.D., Independence, Ia.; Edward F. Wells, M.D., Shelbyville, Ind.; Addinell Hewson, M.D., Philadelphia, Pa.; Chr. E. A. Gronbeck, New York; Geo. Poggenburg, New York; J. F. Rowley, Des Moines, Ia.; W. P. Cleary, New York; L. Barta & Co., Boston, Mass.; W. May Rew, M.D., Poughkeepsie, N. Y.; James Vick, Rochester, N. Y.; R. W. Gardner, New York; L. H. Dunning, M.D., South Bend, Ind.; Miss A. V. Pollard, Louisville, Ky.; R. T. Henderson, M.D., Jackson, Mo.; A. Ahlborn, M.D., Detroit, Mich.; John B. Roberts, M.D., Philadelphia, Pa.; S. C. McCormick, M.D., Duluth, Minn.; F. R. Reynolds, M.D., Menomone, Wis.; Charles W. Evans, M.D., Chicago, Ill.; J. R. Cockroft, Esq., Chicago, Ill.; C. L. Fox, M.D., Kingsville, O.; H. G. Buckingham, M.D., Clayton, N. J.; Harold N. Moyer, M.D., Chicago, Ill.; A. F. Walter, M.D., Gladbrook, Ia.; E. Dolan, P.M., Troy, N. Y.; F. H. Boucher, M.D., Marshalltown, Ia.; Thomas Linn, M.D., Paris, France; R. J. Dunglison, M.D., Philadelphia, Pa.; Mary Hayden, Freeport, Ill.; H. Judd, M.D., Galesburg, Ill.; S. P. Deahofe, M.D., Potsdam, O.; J. P. Cook, Esq., Kenton, O.; Llewellyn Eliot, M.D., Washington; R. C. Jones, M.D., Cincinnati, O.; Howard W. Quick, M.D., Burton, O.; Geo. T. Trezevant, M.D., Abilene, Texas; Jno. S. Coleman, M.D., Augusta, Ga.; John C. Lawver, Esq., Jersey City, N. J.; Wm. Harsha, M.D., Decatur, Ill.; Eugene Way, M.D., Dennisville, N. J.; Samuel B. Rowe, M.D., Rolla, Mo.; Thad. A. Reamy, M.D., Cincinnati, O.; Mr. Burr Witchell, Vermont, Ill.; T. H. McCormick, M.D., Ft. Wayne, Ind.; G. W. H. Kemper, M.D., Muncie, Ind.; W. O. Anderson, M.D., Eureka, Cal.; Chas. W. Hitchcock, M.D., Kalamazoo, Mich.; Mr. Samuel Wright, Columbia, Pa.; Frank W. Garber, M.D., Muskegon, Mich.; E. S. McKee, M.D., Cincinnati, O.; H. Augustus Wilson, M.D., Philadelphia, Pa.; P. O. Hooper, M.D., Little Rock, Ark.; W. W. Dawson, M.D., Cincinnati, O.; W. A. Kane King, M.D., Carthage, Mo.; A. N. Bell, A.M., M.D., Brooklyn, N. Y.; T. Wertz, M.D., Jasper, Ind.; Wm. B. DeWees, M.D., Salina, Kan.; Mr. S. W. Allen, Lowell, Mass.; John P. Stoddard, M.D., Muskegon, Mich.; B. Westermann & Co., New York; C. A. Foulks, M.D., Argentine, Ks.; J. M. Toner, M.D., Washington.

#### Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Five Weeks Ending January 26, 1889.

P. A. Surgeon W. A. Wheeler, when relieved at Buffalo, N. Y., to proceed to Cleveland, O., and assume charge of the Service. January 3, 1889.

P. A. Surgeon F. M. Urquhart, to proceed to Buffalo, N. Y., and assume charge of the Service. January 3, 1889. Placed on waiting orders, on account of sickness, January 12, 1889.

P. A. Surgeon P. M. Carrington, granted leave of absence for thirty days. January 25, 1889.

P. A. Surgeon L. L. Williams, granted leave of absence for fifteen days. December 26, 1888.

Asst. Surgeon W. J. Pettus, ordered to examination for promotion. January 15, 1889.

Asst. Surgeon G. M. Magruder, to proceed to Louisville, Ky., for temporary duty. January 22, 1889.

Asst. Surgeon J. J. Kinyoun, to proceed to Baltimore, Md., for temporary duty. December 29, 1888.

Asst. Surgeon A. W. Condict, granted leave of absence for thirty days. January 25, 1889.

# THE Journal of the American Medical Association.

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## ORIGINAL ARTICLES.

### THE PSYCHICAL TREATMENT OF INSANITY.

*Read before the Mississippi Valley Medical Association at St. Louis,  
September, 1888.*

BY ROSE S. WRIGHT BRYAN, M.D.,  
"CLOVERLY," GLENCOE, COOK COUNTY, ILLINOIS.

I once heard a patient say: "Every Superintendent of an insane asylum should be shut up for six months in his own wards—especially the violent ones—before he is allowed to enter upon his professional duties, in order that he may realize what the *insane atmosphere* means. This ward is literally hell." The lady was herself considered a dangerous and irresponsible person, but I felt that she was uttering a truth, and the remark occurred to me years afterward, under utterly different circumstances, with renewed force. I had been for several months assistant physician in the Massachusetts States Prison for Women, and, interested in my work, had hardly left the building during that time until I was urged to go to an evening reception at Wellesley College, during which and before I reached President Freeman, whose guest I was, I became conscious of a curious mental condition, an overwhelming, bewildering feeling (the counterpart of that physical one we experience when we step out of the darkness into the light), and I believed then, as I believe now, that the unspoken influence of those four hundred earnest, honest students had blinded me, because, during the previous seven months, I had been living and breathing a psychical atmosphere which was saturated with ignorance and crime. Yet I had never been consciously, or even apparently depressed by my surroundings, in proof of which I will take the liberty of stating that not many days before this occurrence, a woman, whose repellant manner had always prevented my addressing any word of sympathy to her, said to me as she was going away: "Doctor, I have often wished you would talk to and encourage me, and you never have; but I must tell you that your cheerful presence has helped me; it has made me feel that there might be hope in the world."

I quote these words because I believe them to

be of value as psychical facts, for it is only through the study of facts that we can hope to arrive at the laws which govern them. That most self-evident ones are ignored in the treatment of insanity I firmly believe, and hope to prove, because the amelioration of the condition of the victims of mental disease was the source of my own personal interest in the study of medicine, and as it, my own personal interest, was largely aroused by the experience of a woman who was confined in an asylum for many months after her convalescence was well established, I will quote from a letter of hers certain passages which I think cannot fail to awaken in your minds, as they still do in mine, the suspicion that the medical profession may wisely pause sometimes in their study of localization, and the morbid anatomy of grave lesions, to listen to the suggestions of the victims of morbid conditions, which, if not so interesting from a surgical standpoint, may, under wiser methods of treatment, average as brilliant results:

"Lost in contemplation and admiration of this Institution since there is nothing else to be lost in, bereft as I am of all my senses and incapable of telling whether I have a pain in my breast or if it be merely the overburdening sense of gratitude I feel at being permitted to remain in so charming a retreat, I nevertheless know that I should be guilty of gross neglect, did I not try to describe to others some of the pleasures and advantages of a permanent abode in this Paradise, and induce them to flee from homes and families in order that they may be permitted to gaze *forever* on the red bricks and evergreen trees in the front yard, or the fences and sheds of the back yard of this delectable ground. Oh! men of the world, why toil and delve when the State Asylum hospitably yawns and begs you to throw yourself into its open jaws—assuring you that they will snap so tight upon you that nobody can ever get you out, not even your own wife, except by wasting all the red tape in the country. If you are *sane* that is no drawback, you will be converted into lunatics as speedily as possible, and if fortunately you are moon-struck you will be kept so, for *of course* that is the happiest condition, *then* all your wishes are imaginary, and you have nothing to do but to eat, drink and be

merry. But, fearing you may think me incompetent to judge of the merits or demerits of a home to which I am so devotedly attached, I will try to write out for you the gist of a conversation which I overheard the other night between the Superintendent and a would or would-not-be patient—that was the question.

"S. Get home-sick and want to see your friends? Oh! no, never. This is a beautiful place! Rather monotonous? Not at all! Why they used to have balls here, then there is church once a month, almost, and the ladies all ride out in the bus every six weeks by a perfect rotary system.

"Are the attendants kind? Of course, what else could they be.

"If you were sick? Sick, man! nobody ever is sick here, they never need anything but a little quinine or tonic or chlorate of potash.

"We might imagine you were deranged and treat you? Never, Sir, never! I assure you! You mistake the case. Insanity is a spontaneous growth of the brain, the cause of which it would be as useless to investigate as to try to find a needle in a hay stack, therefore we never attempt it. Why, Sir, we have patients that have been here for thirty years, and nobody has ever tried to find out why. Nonsense, nonsense, let them alone, and they'll come home, their wits, I mean, whenever they choose, but they never bring any tales with them.

"Afraid you will be an imposition on the State? Oh, no! — is rich enough to keep all her sons in elegant leisure when the regular asylum work is done; but then if you are conscientious about desiring not to waste your spare time, you can wait on the attendants; the State underpays them just to give you this privilege, and to teach you a becoming humility in serving your servants.

"What are the credentials upon which we accept attendants? Muscle, Sir, muscle, and if they have not got that, pluck! Do they need any training? Of course not; have I not already explained to you that there is no science or skill necessary in managing insane people. If they want to get well they can, but if they won't, they won't, you may depend on that. . . . But I am wearying you, just come and try the system for yourself, or step round next board day and dine with the Directors, elegant affair, and all the scraps sent to the patients, so we always give them a little less dinner on that day in order that they may enjoy the treat.'"

This letter, dated 1881, was absolutely ignored by those who should have been interested at the time in the charges that it makes, and although I am ready to admit that there have been both changes and improvements in the majority of asylums for the insane since it was written, I must, on the other hand, contend that it suggests errors of management still prevalent in many:

and that its statements and inferences (which were in the main justified by the facts) were sufficient excuse for my subsequent investigations, and therefore for this discussion, which I have entitled the *Psychical Treatment of Insanity*.

In dealing with my subject, to the extent that the limited time will allow, I desire to include all those agencies which affect the emotional as well as the intellectual processes, exclusive of medicinal substances, whose importance and value I do not intend to question, but rather to emphasize by their omission, the impossibility of doing justice to the therapeutic value of drugs in a paper which is merely suggestive as to methods. The agencies to which I do wish to call your attention, I will divide, as they seem to arrange themselves, into *mechanical and personal*.

By *mechanical agencies* I intend to indicate the locks and bars, and other means of restraint which deprive a patient of his liberty. That they are very often *per se* psychical means of cure every one familiar with the institution treatment of the insane has not failed to observe. The restraint they impose is not only an *unrealized* benefit, but is very often *felt* to be a distinct relief by the restless, perturbed, unhappy prisoners, as any asylum physician might learn if he would question carefully patients beginning to recover. I remember that a patient said to me: "They drew the nurse's bed across the door when I first came here so that I could not go easily out, but they need not have been afraid, I was too glad to feel shut in;" and another most graphically described the anguish of restlessness from which she suffered, and the relief from responsibility she felt when the ward door shut upon her, and she knew she could not be driven hither and thither, except within most narrow limits, by the unreasoning impulses which possessed her.

The unconscious influence of restraint may be compared to that exerted by the trainer who teaches his fleas to walk by suspending a perfectly transparent glass above them until they are impressed with the belief that they have lost the ability to hop, or to that of the mother who holds an excited, struggling, angry child perfectly still until the inability to express its emotions brings repose. The principle underlying these examples is a very important one, namely, the central modification induced through peripheral sensations, and is capable of extended amplification whenever patients are treated individually.

The primary effect of restraint—the mental relief resulting from the inability to act—is often a very large element in the cure of patients committed to asylums for treatment, and acts irrespectively, although conjointly with that felt in the removal from surroundings which are associated with, if not the cause of, the mental disturbance. But in all cases which are capable of im-

provement there comes a time when mechanical control and separation from the normal interests of life become detrimental and they subdue the desire for spontaneous activity, so that the patient, instead of progressing, becomes converted into a more or less complicated automaton. It is just at this point that the wisdom and judgment of the alienists are taxed to the utmost, and that a timid and conservative man may condemn his patient to life-long incarceration because he does not take the personal risk incident to the discharge of a patient not absolutely well; secure in his selfishness, for demented wards, like graveyards and charity, conceal a multitude of sins. I could point you to-day to a patient, thus doomed to life-long residence in a State Asylum by one Superintendent, who was discharged within three months by his successor, with absolutely no change in her condition in the meantime, and who has nevertheless remained perfectly well for years.

I know another lady who, five months ago, was pronounced incurable by the physicians resident in a celebrated private asylum, but who is now far on the road to recovery in a little hospital where she has become an individual, and an interested member of a family circle. Both of these women are convinced that a longer continuance of routine asylum existence would have resulted in a relapse in the one case, and dementia in the other; and in both cases the prognosis of the physicians who pronounced them hopeless would thus have been substantiated as correct. How many others are wasting their precious lives under precisely similar circumstances it is impossible to determine and idle to merely contemplate.

The recognition of medical men that, because the mechanical restraint of asylum life is so extremely beneficial in particular styles and certain cases of insanity, it should be abandoned in others, is of course, the ground of the recent reforms in institution management which have resulted in a wise and increasing use of the parole system, and a better classification of patients, both in this country and in England; but, and in this position I fear I as yet stand alone, I believe that we also need private hospitals which shall be half-way stations between the asylum and the home, where patients may be received without commitments and treated without restraints, putting them upon their honor and encouraging them to make a rational effort toward self-help; hospitals where not only convalescents may be received, but also that large class of persons who are in the incipient stages of mental alienation and who are now treated at home or put into asylums, to their own detriment.

Of these two classes of patients it is difficult to determine which deserves the most considerate pity, those who, through the misdirected love and most natural repugnance of their friends to plac-

ing them in institutions, drift into hopeless conditions which demand their, perhaps, life-long separation from home and friends; or those who, beginning to recover, are, when thrown upon their own resources, like blind men who have just had restored to them their sight. We understand the limitations of a person recovering from typhoid or pneumonia, but I do not think we begin to appreciate the dead weight of acquired habits under which the asylum convalescent staggers, habits of dependence and accommodation to the system of espionage necessary in all large institutions. I have been told by intelligent patients, that it was many weeks after their removal from an asylum before they could go out of doors, or even leave a room, without nervous dread and the sensation that some one was pursuing them; and it was stated as even of more importance that it was impossible for those who had never been insane to realize the strain to which they were subjected in readjusting themselves to their old surroundings, with the added knowledge that very much that they said would be discredited and disbelieved. If a man never mentally unbalanced knew that all his acts were viewed with suspicion and distrust, or fancied it, would he conduct himself naturally? Would he not, on the contrary, subject himself to suspicion in consequence? As did a certain patient who, coming out of an asylum to meet a dreadful grief, dared not give way lest she should be accused of a lack of self-control and was actually recommitted in consequence; because no one took the trouble to analyze her motives for self-restraint, it being easier to consider them due to a lack of feeling than to an excess of self-control.

The *personal agencies* which are psychical means of cure, or injury to the asylum patient, are those mental influences exerted by the physicians, the attendants, and the patients individually or *en masse*. These I will briefly refer to and in reverse order. The last, or *psychical atmosphere* of institutions, has received so little attention that I claimed for it your consideration in my opening paragraph, because I believe that, although this is the factor most frequently overlooked in the treatment of the insane, it is of vital importance. Not all patients are equally responsive to these subtle influences, nor to the gross mental condition of others, but careful inquiry into the personal experiences of many patients has convinced me that certain classes of the insane, notably patients suffering from the deteriorated conditions marked by melancholia, are far more susceptible to purely psychic forces than the sane. In all asylums, public (of necessity) and private, there is no deliberate effort, of which I am aware, to secure a preponderance of sane *thinking*—which does not necessarily imply sane *thinkers*. On the contrary—although there are diversities in the psychical atmosphere of institutions and of wards filled with patients

apparently identical in type, which our imperfect methods of observation may excuse us for ignoring—there is a disregard of most evident possibilities of good and evil in classifying patients together, which in many instances amounts to absolute brutality. Even if a Superintendent does not believe in psychic forces, what excuse can he offer for the existence in an institution under his control of any ward which is understood by the patients to be “incurable,” and over the door of which is virtually inscribed “Abandon hope all ye who enter here.” I have had a patient under my care who had been subjected for many weeks to *treatment* (?) in such a ward, and, although it took me months to argue her out of her determined and persistent reiteration of the statement that I need not try to do anything for her because she was a “hopeless case,” to my mind the evidence was also conclusive that the depression and mental inertia consequent upon her association with so many persons suffering from terminal dementia was more markedly pernicious than the knowledge that she was considered hopeless.

We are all aware that many patients whose minds are in a condition of abnormal activity seem to enjoy the companionship of other insane persons, and that they will claim to have found them the most brilliant men or women they have ever met. Their appreciation of each other's society may arise from the disjointed and disconnected sentences they hear, and out of which they can wrench any meaning they desire, but I believe it is also the outcome of their unconscious recognition and enjoyment of the hyperexaltation from which each suffers, and that it is adding fuel to the flame of inordinate excitement to class such patients together indiscriminately, although there may be cases in which the frenzy of others becomes inhibitory in patients capable of fear.

The *better classification of patients* seems to me to imply not only smaller and more separate wards, but an intermingling of patients whose mental states will act as mutually corrective, a task which is hard and requires the same special study of cases I so desire to emphasize, but that it is not an impossible one my recent experience in the Cook County Poor House would indicate, for we there found it practicable (as we were forced to take care of them) to distribute between forty and fifty insane women among the three or four hundred other female inmates, by exercising a little judgment in this direction. When it is remembered that in wards accommodating on the average fifty persons we had no nurse or attendant on constant duty, and that the element which in this instance we might call *the diluent*, was most undisciplined and turbulent, I think you will justify me in using this instance as an illustration of the feasibility of the plan of distribution of patients which seems to me so preferable to that

ordinarily employed, and which gives a good attendant an opportunity to counterbalance mental states.

Of the disregard of the *real function of an attendant* I am pained to speak. Hardly anywhere does their selection indicate that the point has been reached where it has been realized that no person can have too much culture, too much intelligence, too much tact, who is to deal with the mind diseased. If it had, the whole system of asylum service would be modified, and in place of the attendant who now fulfills the duties of both house-servant and care-taker, we should have domestics to perform ward duties and personal service, and companions whose endowments, training, and character fit them fully to supplement the work of the physician. I once had an opportunity to watch the effect that two attendants respectively had upon the patients whom they shared in common. One was self-absorbed, the other self-forgetful; one taciturn, the other cheerful; one interested in keeping her position, the other in her patients, and there could not have been furnished a better object lesson. If there were time I could give you a record of individuals who knew that they largely owed their recovery to Miss X., while they rarely attributed any benefit to their contact with her partner, whose influence they almost invariably felt depressing and escaped from if possible; yet she was considered by those in authority the better employé—because a brisk housekeeper—and maintained her position for years, so little is the personality and personal influence of the attendant considered.

A letter written me from one of the Eastern asylums within two years will indicate that domestic duties are, even in institutions with training schools for attendants, the first requisite. The lady says, “It seems to me we are more servants than anything else. We have to do all the housework, even the scrubbing and cleaning of the windows, etc. It may be well for me to learn these things, but if this work means giving up all my other interests (I mean forgetting the accomplishments you thought would be so useful in the care of the insane) I do not know whether it is right for me to stay.”

In visiting the State Asylum at Elgin a few years since, I was impressed by the atmosphere of a certain ward as soon as we entered it, and I said, involuntarily, to the physician who was taking us through, “You have a good attendant here.” “Yes,” he replied, “we have. She seems to possess almost a genius for the care of the insane.” I asked to see the girl, and questioned her a little. In response to my inquiry as to whether she had any theory in her care of her patients she replied: “No, except to treat them as if they were little children,” and the happy faces of a row of old ladies busily sewing testified to her success. One of them, I was told, had been



extremely offensive in her personal habits when this attendant was put on the ward, but, in the few weeks which had elapsed since then, had learned to prize so highly sitting dressed up in a clean white apron, on a specially designated bench with the other successful candidates for the daily honor, that she had quite reformed. In this girl's own statement of her theory lies, I think, the key to the situation, although her limited education could not, in all probability, have taught her to fit it to all locks.

For, if insanity, as it has recently been defined, be "a disorder in the powers of adjustment of the organism to its environment," there should be, theoretically, two methods of cure: first, a correction of the adjustment, and second, an alteration in the environment. Science has been defined as "a lucid madness occupied with tabulating its own hallucinations," and the inventors, the discoverers, the martyrs of all ages, have been looked upon as madmen by a greater or smaller number of their contemporaries, simply because the latter were ignorant of the height and breadth and depth of the environment to which the object of their ridicule or pity had attuned himself, self-evident as it was to him. But, if we leave out this class of persons—those whose widened vision subjects them to a suspicion of want of mental balance—we find that the majority of the insane have contracted and distorted their horizon, and that we could, if we were wise enough, create for them within its limit a circle of interests and activities which, if it did not result in recovery, would at least make them happy and useful.

I believe that inmates of public institutions who are capable of working are capable of enjoying a reward of labor if properly presented to them, and that, since the State has not condemned them to hard work, no Superintendent is justified in utilizing their efforts without some compensation. This may be nominal, but it should be tangible, and with infinite tact directly devised as a stimulant, not only to the patient who receives it, but to those who are too lazy or too indifferent to employ themselves; and here we are again reminded of the necessity for more intelligent personal supervision of every case. The men or women whose mental capacity will not permit them to earn more than the salary ordinarily paid the asylum attendant are not capable of organizing appropriate plans of stimulation for individual cases, and the quota of physicians in any large institution is not great enough to allow them time for special work. That the public would be amply reimbursed for the added expense of employing proper persons to assist the physicians by the increase in cures and the value of the work performed by properly directed and stimulated patients I firmly believe, and think that we may even be enabled to demonstrate the advisability to our legislators, when we can persuade them that it is better to expend

\$500 for one year than \$100 for five years in curing a patient, if as an economical problem it is considered merely from standpoints of overcrowding and the saving of time to the individual.

Of the personal influence of physicians there is little to say, for, as a rule, they have no time to exert it; but, without desiring to criticise any of the profession needlessly, I am constrained to allude to two instances which have come within my own knowledge, where the lack of the power to individualize treatment demonstrated the possibility of erring in unusual cases.

There was a certain patient several years ago in a large asylum who called every man Lord John Lupton and every woman Mary Lupton, who yet for years carried all the notes and did much of the shopping for the attendants with unerring fidelity, and a serene contentment in feeling himself of use and independent (he was always paid a trifle for his services) which should have been instructive. Yet a new Superintendent, who did not believe in exceptions, shut him in a ward, not heeding poor Jeremiah's prophecy "that he would be out and doing when Dr. A. was dead and in his grave," a prophecy that was, fortunately for the prophet, fulfilled within a year.

There was at another time, in the same institution, a woman who, having had a "fixed delusion" for some years, was pronounced hopeless, according to the books, and left, therefore, to imagine at her pleasure that she was an unpardonable offender upon whom the church would fall if she should ever attempt to partake of the sacrament. A certain attendant, becoming convinced that, if this woman could once be persuaded to go to communion and so discover that the consequence she expected did not follow, she would be well, begged to take her, but the physician in charge of the case refused his consent, as he had no precedent to justify him in such an experiment. By dint of persistent persuasion, however, the attendant at last obtained her way, and the patient has, in consequence, been for years the housekeeper for the parish priest and a living refutation of some medical axioms.

The latter case reminds me of another which has proved to me most suggestive in dealing with patients whose delusions are narrowing themselves to one, and I think it, therefore, worthy of presenting. A lady, Miss F., who had also been for several years a victim of melancholia, thought when asked to sing hymns that the persons making the request were trying to force her into still deeper damnation, but never protested, although repeatedly going through the ordeal. It chancing, however, that a lady in the institution, who was very fond of this patient's singing, having lost her only brother, went to Miss F. the evening after the funeral and begged her to sing some of the old and endearing hymns. The patient said to me not long after that she had been mistaken

regarding people's intentions towards her, for it would have been impossible for Miss L. on *that occasion* to have willingly injured *her*!

These cases are capable of logical analysis, and will rouse little dissenting criticism, but in reiterating my firm belief in the possibility of a conscious but unspoken controlling force which may be exerted by the sane being over the insane, and in urging the profession to its wise employment, I am forced to allude to my knowledge of the fact that we are warned day by day by the students of physiological psychiatry not to believe in the hypermaterial forces, nor to concede that mind may influence mind without, as well as by means of, premeditated effort. Yet, although we grant that there has hitherto been no science of mind, and that recent anatomical research and experiment seem to promise a more logical basis for theories than the gratuitous suppositions upon which we have hitherto relied, are we, therefore, to conclude that the machine is all? Because a clever thinker of this school assures us that every emotion is derived either from hunger or disgust, and that all human conduct is expressible in terms of chemical affinity, has he, therefore, explained affinity or rendered it a material substance? Or will his, or any, denial of psychic forces render void the wonderful personal influence which, far more than their words or deeds, causes us to worship at the feet of the leaders of humanity? Moreover, if from the amœba has been evolved the man, and from the hunger for food an equally demonstrable hunger for righteousness, are they scientists who ignore either the man or his aspirations, or alienists if they do not understand the utmost capacity of contemporaneous humanity, no matter what the source? Although the generally accepted theory of evolution proves, as I am ready to admit, that the physical man is the creation of uncontrollable forces which he blindly obeys from hour to hour, that our vaunted free will is, in its last analysis, the strongest desire, and that our acts are determined in consequence by the alternative which seems to us potentially the most agreeable at any moment of our existence—has it explained away desire or deprived us of the opportunity to use it to fulfil our own behests? On the contrary, are not the imbecile, the child, the lunatic, educable by us to that degree that measures our capacity to awaken *their* desires for those objects of possession or conditions of existence which will insure their most perfect adaptation to their environments? But, since insanity, as has already been pointed out, is the inability to adjust the mental relation to the relation in the environment, the cause of the inability must be evident before the alienist can deal scientifically with the defect.

Omitting from consideration those cases in which the disordered mental process arises from organic lesions, I think it will be sometime

demonstrated that in this faulty adjustment it is not the thought in the majority of cases which is at fault, but the underlying emotion, "for everywhere feeling is the substance of what, when it is present, intellect is the form," because "while thought is the establishment of a relation, feeling is the occurrence of a state." More fully stated, "the physical substratum of thought is the establishment of a dynamical connection between the two discharging elements which are the physical substratum of the feeling," and it is therefore to abnormal discharges, or abnormalities in the discharging elements, that I venture to suggest we will find ourselves justified in chiefly turning our attention in future discussions of the psychical treatment of insanity. These abnormalities may be due to physical or psychical aberrations, more often, and eventually in all cases which progress far enough, to a combination of both; wherefore, in the accurate apprehension and estimation of the relative importance of these conflicting forces lies, I believe, the skill of the successful alienist. An exhausting illness, a severe mental shock, or an overwhelming grief may each induce the sense of depression, the feeling of illbeing, which the mind interprets to mean eternal damnation; in each case tonics may be useful, but there the identity of indication for psychical treatment probably ceases. I have heard of a man whose wife was most harassing, and who became insane as the result of incessant nagging, yet his physician was filled with amazement when the patient's discovery that his tormentor had run away with another man restored his reason, and naively confessed that he, the physician, had been concealing the information lest it should make the man worse!

The human brain has been well compared to a harp in which but one string perchance is out of tune, yet it destroys the harmony of all; and just as it is only the skilled and tuneful musician who can play upon the imperfect musical instrument without emphasizing and increasing the discordance, or who can detect and remedy the flaw, so it is only the skilled and humanly tuneful physician who can elicit harmonies from the unstrung harp of life, or determine where the source of discord lies. To women, whose emotional nature is so much more varied than that of men, whose instinct is confessedly so much more acute, must we look, therefore, I am persuaded, for the next advance in the psychical treatment of insanity, though it be left to men to demonstrate the physical basis of mind. For women will, with their quicker and keener sympathies, bridge the chasm of perverted feeling or thought beyond which the insane isolate themselves, more readily than men, and will perceive more easily the necessity of establishing a common emotional and mental standing ground, before arguments become of the least avail. Several times I have

heard patients say, to one woman of my acquaintance: "*You* could not have helped me if you had not believed me," in cases which others had failed to cure; although they had had an earlier and therefore better opportunity to correct morbid processes before they became fixed, and to compass the silencing of a discordant string until nature had had time to restore its proper tension. Nevertheless I believe that there are, and will always be, men as well as women, who, through their mental and moral equilibrium and capacity to draw others within the sphere of its influence, may act as direct healers to the mind diseased, and to all such I gladly submit for criticism and elucidation, the few and imperfectly expressed thoughts to which you have so kindly listened, and which I have ventured to present because I believe in their essential truth.

## AN INTRODUCTION TO THE STUDY OF PNEUMONIC FEVER.

BY EDWARD F. WELLS, M.D.

### HISTORY.

A disease characterized by the striking peculiarities of pneumonic fever must necessarily have attracted the attention of the disciples of our art from the very dawn of Medicine. That such was indeed the fact we know from the distinct allusions to it found in the most ancient of the writings of antiquity which have been handed down to us. It is true, however, that being comparatively ignorant of the relations existing between the clinical phenomena and the anatomical alterations of diseases, and of physical diagnosis,<sup>1</sup> it was simply impossible for the physician of old to accurately differentiate the various acute diseases of the lungs, yet, inasmuch as the malady under consideration is the most common—excepting ordinary bronchial catarrh—most severe and most fatal—phthisis<sup>2</sup> excepted—of these, we may infer, with much probability, that their words refer, for the greater part, to this affection.

Later, when it became the custom to occasionally continue the study of fatal cases from the bedside to the post-mortem table, the distinguishing pathological features of this disease became better known, although it is only from a comparatively recent period—the second decade of the nineteenth century—that pneumonic fever has been recognized as a separate and distinct entity, capable of being diagnosed during life and demonstrated after death.

Hippocrates<sup>3</sup> speaks often and prominently of peripneumonia and other pulmonary affections.<sup>4</sup>

<sup>1</sup> *Enchiridion* physicians. Of these the second—who flourished from 460 to 350 B.C.—was the most illustrious and was probably the author of that portion of the "Works of Hippocrates" which treats of the

All the acute pectoral diseases, however, are confounded together, and some of the diagnostic and prognostic points upon which he insists are useless and trifling. For example, he pretended to be able to locate the seat and extent of the local inflammation by the characteristics of the coating upon the patient's tongue! He considered every expectoration which relieved pain of good import, but the contrary if the opposite prevailed. He also thought that the disease was caused by drinking stagnant water.<sup>5</sup>

Passing on four centuries to the Christian era and the time of Aretæus, Celsus and Thenison, we find that considerable progress had been made in the symptomatology, diagnosis, prognosis and treatment of this disease.

Aretæus<sup>6</sup> says that the malady is characterized by high fever and oppression of the chest; with no pain if the lungs alone are affected, but if the pleura participates in the inflammation pain is not absent. The expired air is hot and the patient prefers to sit upright in bed, because in this position the dyspnoea is least. The face, and especially the cheeks, are red, the eye is lustrous, the point of the nose is elevated and the veins of the neck are prominent. The appetite is lost and the spirits are depressed. The pulse at the beginning is large, soft, very frequent and bounding. Externally the parts are moderately warm and moist, but internally they are hot and dry. The cough is generally without expectoration, but if this appears it consists of a foamy, bilious or mixed-with-blood mucus. The cases with sanguineous expectoration are the most dangerous. Should the case approach a fatal termination there comes on sleeplessness, mild delirium, coma, coldness of the extremities, blueness of the nails and smallness of the pulse. Death generally occurs on the seventh day.

In another place he speaks of an inflammatory affection marked by ardent fever, pain in the side, dyspnoea, cough, difficult expectoration of sanguineous sputæ, flushing of the cheeks, etc.

From either of these descriptions one can recognize a moderately truthful picture of pneumonic fever, although the author has evidently included in his delineation, besides this disease, both pleurisy and the severer forms of bronchitis. This writer is the first to mention the absence of pain in those cases in which the pleura is supposed to remain free from inflammation, and that death is apt to occur on the seventh day—opinions which became firmly rooted in the professional mind and have found a place in every text-book published to this day.

Thenison<sup>7</sup> treated peripneumonia by means of

acute diseases of the chest. See Littre's "*Vie d'Hippocrate*" prefixed to his splendid edition of the "*Œuvres d'Hippocrate*"

<sup>2</sup> *De Morb.*, Lib. II. *De Int. Affec.*, Lib. II.

<sup>3</sup> For further information consult editions of the "Works of Hippocrates" edited by Adams, London, 1856; Boesius Chouet, 1657; Kuhn, Lips., 1825; Littre, Paris, 1839 and others.

<sup>6</sup> *De Caus. et Sig. et Cur. Morb.*, Lib. II, cap. 1.

<sup>7</sup> Quoted by Kinsman, *Ohio Med. Recorder*, June, 1850.

baths and inunctions of oil—measures which are yet found useful.

The Romans gave to medicine very little in the way of original observation, and Celsus<sup>8</sup> can be viewed in no other light than as a mere compiler.<sup>9</sup> As such, however, he probably faithfully reflected the opinions of his immediate predecessors and contemporaries, and his words, few as they are, have therefore considerable value in this connection.

He says that from an inflammation of the lungs there arises a vehement acute disease which the Greeks term peripneumonia. The whole of the lungs are affected; the symptoms being cough, expectoration of bilious or purulent matters, oppression of the chest, dyspnœa, ardent fever, protracted sleeplessness, nausea and death. He naïvely remarks that the disease is more dangerous than painful.

Galen, who, although a native of Pergamus, in Asia, achieved his great reputation in Rome during the latter half of the second century, and who was without doubt the greatest of the ancient medical writers, treats of peripneumonia,<sup>10</sup> but has nothing to add to what has already been quoted from his predecessors.

Cœlius Aurelianus, a Numidian, who followed Galen a generation later, has given us a vivid description of pneumonic fever under the headings of pleuritis and peripneumonia.<sup>11</sup>

His *pleuritis* is a disease with a high fever, severe and shooting pains in the side, light cough and dyspnœa. Expectoration, at first foamy, but soon becoming bloody and finally purulent, is generally present, although it may be absent. The patient is restless and obtains little or no sleep. If he lies upon the affected side he soon becomes fatigued, and if he attempts to lie upon the other the pain is increased. The tongue, which is at first moist, soon becomes raw and dry.

Of his *peripneumonia* he says that there is ardent fever, a flushed and glowing, although changeable, countenance, frequent and oppressed breathing, light cough with a bloody, rusty or bilious expectoration, the pulse is hard and quick, and the tongue which is at first moist and white, becomes red, raw and dry. The patient compares the oppression to the placing of a heavy weight upon the chest which presses the walls backwards. The dyspnœa is lessened if the patient assumes an upright position, but there still remains a constant desire for inhaling deeply and largely cold, fresh air. The patient is anxious, restless and sleepless, and if, perchance, he obtains some sleep it is broken by sighs and starts, and is, consequently, unrefreshing.

It is evident from the above descriptions that our author is referring to pneumonic fever, including in the first group those cases in which pain is a marked symptom and, according to the then and now prevalent opinion, accompanied by more than the ordinary amount of pleuritis, whilst in the second are found the cases attended by considerable bronchial catarrh and little pain.

The names "*pleuritis*" and "*peripneumonia*" are, however, hopelessly confounded in the works of the ancients, being often used interchangeably. This is clearly shown from the fact that pleurisy was said to be capable of producing cavities in the lung!<sup>12</sup> At a later date when greater accuracy was desired and aimed at, the older writers, when they spoke of pleuritis, always referred to an inflammation of the parietal portion, inasmuch as the visceral layer was not recognized as being distinct from the lung.<sup>13</sup>

In the sixth century we find pneumonic fever treated of by Ætius<sup>14</sup> and Alexander Trallianus,<sup>15</sup> physicians of great repute in their day.

Alexander's *pleuritis*<sup>16</sup> was characterized by fever, dyspnœa, cough and lancinating pain in the side, whilst his *peripneumonia*<sup>17</sup> premised heavy breathing, oppression, dyspnœa, a coated tongue, flushed cheeks and a very rapidly developed fever.

The Arabian physicians, Rhazes and Avicenna, who flourished in the ninth and tenth centuries, respectively, speak of the disease under consideration. The former directs particular attention to the characteristics of the pulse<sup>18</sup> and the latter to those of the expectoration. Avicenna was the first to state that sanguineous expectoration is met with only in pneumonic fever.<sup>19</sup>

Aaron,<sup>20</sup> an Alexandrian physician of the twelfth century, also speaks of peripneumonia and quotes approvingly from Rhazes, but has nothing worthy of note to add to the then sum of knowledge.

It has generally been the custom for writers on the history of pneumonic fever to divide the time into two great periods; the one beginning with the era of Hippocrates and ending with that of Laennec, and the other the years subsequent to the first. I am, however, clearly of the opinion that the line of demarcation should be moved nearly two centuries backwards—to the times of Harvey,<sup>21</sup> Sydenham<sup>22</sup> and Malpighi<sup>23</sup>—for when physicians once began to observe, think and act for themselves, instead of being bound hand and foot by tradition and the authority of the ancients, the discovery of percussion and auscultation, and all the wonderful advances recently made in this

<sup>12</sup> Fox, Reynolds' Syst. Med., Phila., 1880, vol. ii, p. 152.

<sup>13</sup> Sturges, Nat. Hist. Pneumonia, London, 1876, p. 8.

<sup>14</sup> Ætii Med. Græci, etc. Ætius was a resident of Mesopotamia.

<sup>15</sup> Opera Omnia, Puschmann's Edition, Wein, 1878. Alexander, of Tralles, as his name indicates, was a Greek.

<sup>16</sup> See, Op. cit., Lib. vi, cap. i.

<sup>17</sup> Ibid, Lib. v, cap. i.

<sup>18</sup> See Cont., Lib. x, cap. i.

<sup>19</sup> Canonum, Lib. iii, Tract. iv, cap. i.

<sup>20</sup> See Surianum's edition of Rhazes, Lib. x, cap. i.

<sup>21</sup> De Motu Cordis, etc., Frank., 1628. Harvey born, 1578.

<sup>22</sup> Prax. Med. Exptm., Lips. 1695. Sydenham born, 1628.

<sup>23</sup> Exercit., etc., Ed. ii, Francof. 1678. Malpighi born 1628.

<sup>8</sup> De Medicinæ, Lib. iv, cap. vii.

<sup>9</sup> Glover, Lond. Lancet, N. Y. Ed., 1881, vol. i, p. 282. See also Billings, "Jour. Am. Med. Association," Feb. 18, 1888, p. 216.

<sup>10</sup> De Loc. Affec., Lib. v, cap. iii.

<sup>11</sup> Acut. Morb. Lib. ii, cap. xxv-xxix.

field have followed as a natural and unavoidable sequence. Because of the immense importance of the discovery of auscultation, it might be well to divide the modern period into two subdivisions—from Sydenham to Laennec,<sup>24</sup> and from Laennec to the present. The material at hand pertaining to both these periods is so abundant that its critical analysis is impracticable, and a superficial survey of the field is all that can be attempted.

Although much had been learned regarding pneumonic fever, yet even at this comparatively late day many and various diseases of the chest were confounded together—the most illustrious leaders of professional opinion uniting in denying the possibility or desirability of making an exact differential diagnosis.

Thus Sydenham,<sup>25</sup> in treating of pneumonic fever and pleurisy as they followed the epidemic cough of 1675, did not clearly distinguish between the two maladies, and many other writers<sup>26</sup> of the sixteenth, seventeenth and eighteenth centuries plainly acknowledge the same failure.

When Cullen<sup>27</sup> speaks of pneumonia he refers to "the whole of the inflammations affecting either the viscera of the thorax or the membrane lining the interior surface of that cavity, for neither our diagnostics serve to ascertain exactly the seat of the disease, nor does the difference in the seat of the disease exhibit any considerable variation in the state of the symptoms."

The originator of the celebrated Brunonian System of Medicine<sup>28</sup> includes under the term peripneumonia pneumonic fever, pleurisy and carditis.

Pringle,<sup>29</sup> after having treated of pulmonic and pleuritic inflammations under separate headings in his earlier editions, later considered them together as one distemper, "in which the lungs are always inflamed, and often without the pleura; but the pleura never without the lungs."

Borsieri<sup>30</sup> thought pneumonic fever a double-faced disease—the one side being peripneumonia and the other pleurisy, these having the same seat and nature and only distinguishable by their symptoms, the severe and continuous pain of the one and its absence in the other being the only difference between them.

Frank<sup>31</sup> considered it clear and beyond doubt that there was no difference between peripneumonia and pleuritis, and that we not only can, but must, consider them as one disease and under a single name.

Sprengel<sup>32</sup> says that when there arises an inflammatory fever, with a severe, sharp or heavy pain in the chest, combined with a severe expectorating cough, the disease is to be called inflammation of the lungs, or of the chest, but making no distinction between pleuritis and peripneumonia.

Gregory<sup>33</sup> says: "There are several different names given to the diseases of the thorax, as the inflammation attacks different viscera, as the pleura, lungs, mediastinum, diaphragm or pericardium, but all these are so connected that it is difficult to make a proper distinction." He therefore treats of them *en masse*.

Richter<sup>34</sup> was of the opinion that at the bedside of the patient it was impossible to distinguish between pleuritis and peripneumonia. They are often combined in the same case, and in many instances it is difficult to say which predominates; even the autopsy not clearly proving this point.

Even Vogel<sup>35</sup> and Neumann,<sup>36</sup> so recently as 1828 and 1832, respectively, held similar opinions.<sup>37</sup>

Valsalva<sup>38</sup> and his more illustrious pupil Morgagni,<sup>39</sup> however, indistinctly held that pneumonic fever and pleurisy should be studied separately, and the pathological investigations of the latter of these authors assisted greatly in placing the morbid anatomy of the disease upon a firm foundation of facts.<sup>40</sup>

Auenbrügger<sup>41</sup> in 1761 published his epochal work on percussion, which attracted some attention at the time and was even translated into a foreign language, but it was soon forgotten, save meagre references to it by Stoll<sup>42</sup> and Van Swieten,<sup>43</sup> until rescued from oblivion by Corvisart<sup>44</sup> a third of a century later. Thus the promulgation of a wonderful discovery—one which might have revolutionized the diagnostics of the day—scarcely produced a ripple upon the placid surface of the professional stream, and can only be accounted an incident by the way. To the physician of the present day, accustomed to practice percussion in every case of thoracic disease as a matter of routine, the step in advance made by the discovery of this method of physical exploration can scarcely be appreciated, and it can only be a subject of wonderment that it was allowed to so long remain in obscurity, and was finally accepted by

<sup>24</sup> Traité de l'Auscultation Médiate, Paris, 1819.

<sup>25</sup> Works, Wallis' edition, London, 1788, vol. i, p. 330.

<sup>26</sup> Galii, De Peste et Peripneum., etc., Bix., 1565; Vischer, De Caus. et Dif. Adfec. Pulmonis, Tib., 1581; Pansa, Consil. Peripneum., Annab., 1614; Tossius a Serra, Peripneum. Cur. Rat., Venet., 1618; Baglivi, Prax. Med., Roma, 1696; Stahl, Theor. Med. Ver., Halle, 1708; Boerhaave, Aphorism., Lugd., 1721; Hoffmann, Med. Rat. Syst., Halle, 1729-40; Van Swieten, Com. Aph. Boerhaavii, Leyden, 1741; Haller, Opusc. Path., Laus., 1755; Morgagni, De Caus. et Sed. Morb., Vienna, 1761; Cleghorn, Epidem. Diseas. Minorica, Lond., 1762; Lieutaud, Frax. Med., Amsterdam, 1768; Stoll, Rat. Med., Vienna, 1777; Frank, Rat. Inst. Clin., Vienna, 1797; et. al.

<sup>27</sup> Inst. Physic., vol. i, chap. vi, sec. 24.

<sup>28</sup> Brown, Elements of Medicine, Portsmouth, 1803, p. 229.

<sup>29</sup> Diseases of the Army, 6th edition, London, 1768, p. 142.

<sup>30</sup> Inst. Med. Prac., vol. iv, sec. 97-100.

<sup>31</sup> De Cur. Hom. Morb., lib. ii.

<sup>32</sup> Handb. d. Path., Leipzig, 1796, S. 347.

<sup>33</sup> Mss. Lectures in Library Med. Chir. Soc., London.

<sup>34</sup> Die Spec. Path. und Therap., Berlin, 1821, Bd. iv, S. 372.

<sup>35</sup> Handb. d. Arzneiwissensch., Wien., 1828, Bd. iv, S. 144.

<sup>36</sup> Krankh. d. Menschen, Berlin, 1832, Bd. i, S. 151.

<sup>37</sup> See Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Bdv., Leipzig, 1877, S. 10.

<sup>38</sup> Opera., Lugd., 1742.

<sup>39</sup> De Sed. et Caus. Morb., Lov., 1766.

<sup>40</sup> See Sturges, Nat. Hist. Pneumonia, Lond., 1876, p. 3.

<sup>41</sup> Inventum Novum ex Percussione Thoracis, etc., Vienn., 1761. Leopold Auenbrügger was born in Grätz, Styria in 1732 and died in Vienna, where he afterwards became hospital. Besides his immortal work on percussion and insanity and wrote a drama. He died in 1809. See Ersch u. Puschet's Literatur d. Medizin; Biographie Médicale, etc.

<sup>42</sup> Rat. Med., Vienn., 1777.

<sup>43</sup> Com. Aph. Boerhaavii, lib. ii. Van Swieten was a resident of Vienna at the time Auenbrügger's book was published.

<sup>44</sup> See his translation of Auenbrügger, Paris, 1806.

the medical profession with so much hesitation and caution.

With the discovery of auscultation by Laennec<sup>45</sup> the history of thoracology enters upon a new and splendid era. This invaluable discovery and the revival of the practice of percussion, coupled with the time, men and circumstances which received them, led to an enthusiastic cultivation of physical diagnosis throughout the world, which has greatly extended the bounds of our knowledge in this direction, and gave thoracic pathology an impulse which continues to this day.

With the advent of this era we enter upon the Present, and the scope of this Inquiry, and the further history of pneumonic fever will be developed as we proceed.

(To be continued.)

## LEGISLATIVE RESTRICTION IN MEDICAL EDUCATION AND PRACTICE.

*Read before the Central Kentucky Medical Association, at Lexington, Ky., April 18, 1888.*

BY GEORGE COWAN, M.D.,

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In the discharge of the duty required of me by the usage and law of this society, I propose on retiring from the chair, to occupy your time in the discussion of the subject of *Legislative Restriction in Medical Education and Practice*.

The selection of such a topic for an anniversary address, I trust will not be regarded as an inappropriate one at this juncture of events in the history of our profession. For, I doubt not you will entirely agree with me that its careful consideration is a present urgent necessity, because it involves so many very great interests of momentous and immediate importance both to the profession and the public.

It is now about ten or twelve years since the tendency to legislate anew upon this subject was revived on the part of the respective States of the Union. The inception of the enterprise was from within the profession itself, various of the State medical organizations taking the initiative, and furnishing, from time to time, whatever of momentum the movement has since acquired. It is true that, in many instances, our State legislatures have not been entirely passive in shaping this legislation; yet, it is so far as completed, mainly the work of the profession, so that whatever of success or failure may attend it, will be passed to the credit of the profession as a body. It is also true that the tendency of this legislation, has not met the wishes of the original advocates of legislative restriction in medical education and practice, and is generally unsatisfactory to the profession at large.

As regards the extent of the movement, up to

this time, we find that thirty odd States and Territories have passed laws varying very much in their requirements, and often quite inconsistent and contradictory in their application as between the individual States; yet, all agreeing in this one particular, the substitution of the state's license for the college diploma.

Hoping to correct some of the gross errors manifest in these ill-advised efforts at legislation, and, to systematise and reduce them to a uniform code of laws, which could be made of universal application throughout the Union, the American Medical Association, at its annual meeting in 1885, adopted a series of laws or a bill to that end, and the Permanent Secretary was directed to send a copy of it to each of the State societies, for their approval and recommendation to the several legislatures. It failed to secure the endorsement of these societies, and, at the annual session of the Association, which met in Chicago, in 1887, a committee was formed to draft and report another set of laws to be recommended again to the several State societies for the same purpose.

Legislative restriction of medical education and practice, such as we are now considering, is no new thing to the medical profession of this country. It is a fact of great historic importance and interest, as may be learned from an address of Dr. N. S. Davis, delivered before the American Association of Medical Editors,<sup>1</sup> that the majority of the original thirteen States had legislated upon this subject during the first decade of the present century. This legislation, we learn from this able address, took the shape of legal enactments of incorporation, conferring upon the State medical societies and their auxiliaries, "the power, and enjoined the duty of appointing State Boards of Examiners (or 'Boards of Censors,' as these bodies came finally to be called), for the special work of examining and determining the qualifications of applicants for admission into the medical profession. And at the commencement of these organizations, during the first decade of the present century, almost the entire body of men who entered the profession, entered through examination of one of these 'Boards of Censors.'" We are told also in this address, that there was one other mode of obtaining a license and entering upon the practice of medicine at that time. "The different States in granting charters for medical schools, endowed these schools, with a few exceptions, with the privilege of examining such students as had complied with certain stated regulations, and of issuing diplomas to them," which diplomas were considered as of equivalent force and authority as the State's license.

Of the success of these "Boards of Censors," Dr. Davis further states in this same address that, "they produced all of the beneficial effects expected of them, and that perhaps in no country

<sup>45</sup> *Traité de l'Auscultation Mediate*, Paris, 1819.

<sup>1</sup> At Cleveland, June 3, 1883.



at any period of time, has a more rapid degree of progress been made in the educational, social, and practical interests of our profession than took place during the first quarter of the present century in our country."

In this way, at a very early day, and in a very absolute and complete manner, did the State medical organizations secure the control of medical education and practice in this country.

It proved to be, however, only a very short-lived lease of power. The public, then as now, ever jealous of the appearance on their statute books of any sort of class-legislation, soon arrived at the conclusion that these laws had organized the regular members of the medical profession into a powerful guild-association or trades-union, the sole end and aim of which was to secure for themselves a lucrative monopoly. These laws were, therefore, quickly repealed, or rapidly fell into neglect and disuse, in consequence of the current of popular feeling which had set in against them.

These changes took place during the decade 1830-40. Since this time until the recent revival of legislation on this subject, already mentioned, the medical colleges have remained in undisputed possession of the business of furnishing to the public the credentials of its medical advisers, and the license which the diploma confers to practice medicine.

Following closely upon the repeal and decadence of the laws creating these boards of censors, was the organization of the American Medical Association, and the adoption of its incomparable Code of Ethics. This was the natural and logical outcome of the loss of power and influence sustained by the repeal of the State laws which had created the "Boards of Censors." It was simply a necessary effort of self-preservation upon the part of the profession to re-assert and maintain some sort of self-control and discipline over itself as a body. The alliance of the profession with the State authority through means of these "Boards of Censors" having been broken up, the way was open, and the necessity made clear and imperative for just such an organization as was effected in the spring of 1845, namely: "The American Medical Association." The declared purposes of this organization at the very outset of its career, and those which it has all the while steadily kept in view and endeavored to accomplish, were: "To give frequent, united and emphatic expression to the views and aims of the medical profession in this country; to supply more efficient means than have hitherto been available for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor, and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of

medical men; and for exciting and encouraging emulation and concert of action among them."

These lofty and worthy ends, this Association proposed to obtain by force of an enlightened and correctly-guided public sentiment. And for forty-two years, discarding all support from or coalition with the State or general governments, it "has pursued the even tenor of its way," quietly and very successfully working out to its fulfillment, the mission so courageously undertaken. And it is not by any means probable that it could have accomplished better or larger results, had the Association been bolstered up in its work by the fostering care of State patronage, so liberally dealt out to the State societies and boards of censors in the beginning of the century. I repeat, that it has faithfully and truly redeemed as far as was practicable, every one of its promises to the profession and to the public. Particularly is this noticeable in the elevation of the standard of medical education, and in the increased power of control and discipline of the profession as a guild or a society compact. Through the influence brought to bear by this Association upon the best medical schools of the country, the three-years graded course of didactic lectures, with fuller and better clinical teaching, has been inaugurated; the curriculum of study has been greatly enlarged and improved, and the conditions, for graduation rendered more exacting and absolute in their requirements. The difference in all these respects in the best schools of this country, shows a very marked contrast between the present time and forty years ago.

This short review of the history of our subject teaches, I think, most emphatically that the improved status of medical education and practice during the two epochs which have been contrasted has originated, as all real and true progress must, from within the profession itself. The cultivation and development of scientific medicine is governed by fixed laws or conditions, and takes place ordinarily either with or without the help of political patronage, and oftentimes in spite of hostile or obstructive legislation upon the part of the State. It cannot be denied, however, that there are certain conditions, which will be referred to hereafter, under which political or State aid might become a very valuable handmaiden to medical science.

If any action is taken upon this subject at the approaching annual meeting of the Association it will doubtless be such as in effect will either supplement or supplant the work of the medical profession in its capacity as an organized body; or it will place the matter of legal restriction of medical education and practice wholly under the control of the Association.

There are most serious difficulties in the way of the adoption of either of these plans. In the first place it is manifestly impossible to form a

permanent and proper sort of alliance between a voluntary association and the State, either body bearing the relation to the other as a supplemental part of a third body composed of the two. The State governments can, and doubtless will, lend a somewhat respectful attention to suggestions made by the Association, they may adopt some of the ideas advanced in regard to the framing of laws; and even recommendations of the officials to execute these may in a few instances be received favorably. But the final control over the whole matter must of necessity remain absolutely and wholly in the hands of the State legislatures. It can scarcely be contemplated that the Association will be able to regain and permanently exercise the authority once wielded by the boards of censors. To secure the enactment of restriction in medical education and practice, and also the execution of it, is a monopoly greater than the American people will be likely to grant. And yet this seems to be the expectation and hope of the advocates of these restrictive methods of legislation.

For the sake of argument we may allow that it is feasible to secure such absolute power, and that the Association might never, or during a long period of time, be disturbed in the exercise and enjoyment of the power and privileges of such a monopoly. The immediate and inevitable result, however, would be to introduce political issues and partisan strife into all of our medical societies, which would have become, almost at once, part and parcel of the political machinery of the country. It would be impossible for them to retain and exercise such absolute power, unless they were closely allied with the dominant party of the State. Empiricism and political demagoguery would then strike hands together, and quickly win a triumph over scientific medicine, and thus some of the valuable and dearly bought experiences which the profession had acquired in its alliance with political power during the first quarter of the century will have been lost.

It is true that in the State of Virginia, and possibly in two or three others, the State medical societies have been empowered to make out a list of names from which the Governor *must make his selections* in the appointment of the State Board of Examiners. But it is hardly supposable that these societies can enjoy for any great length of time such a prerogative—especially if exercised in a fearless and independent spirit in behalf of scientific medicine, and without reference to the interests of political partisan organizations.

On the other hand, in the large majority of the States and Territories which have legislated on this subject recently, the appointments to the boards of examiners are made *immediately* by the Governor, unrestrained by any such dictatorial influences; and, in one State, Arkansas, the Justices of the Peace of each county may exercise

this important prerogative, each county being entitled to a Medical Board which may examine and license applicants.

There is, as might have been expected, great contrariety and incongruity in all this recent legislation. The laws of Minnesota and California in regard to medical practice, however, are so very peculiar and unique that it would be gross injustice to the full discussion of our subject to pass them by unmentioned. Among all of the States mentioned, Minnesota enjoys the bad pre-eminence of the championship of that miserable craze and cheat of the 19th century—Homeopathy. The laws of that State specifically require that *at least two* of the nine members constituting the State Board of Examiners shall be of these self-styled medical men calling themselves homeopaths; while it entirely fails to define the medical status, or even the occupation, of the remaining seven members in any way whatever. It would, therefore, be entirely competent for the State of Minnesota to have a board consisting exclusively of partisans of this "*pathy*." But, in whatever way our fancy might be indulged in the make-up of the board under the existing laws of Minnesota, there would be no incongruity, no mixing up of strange bed-fellows, provided representatives of scientific medicine are not appointed for service with such boards. California, on the other hand, to avoid the impropriety doubtless of thus putting such unsuitable bed-fellows together, has very considerably arranged for three entirely distinct and separate boards, which are styled respectively, the "Homeopathic," "Eclectic," and "Regular" boards. Each board is entirely independent of the other, so that applicants failing to pass either one, can in turn if need be, take their chances to pass one of the remaining two. In this way every applicant will almost surely pass, and all the possible compensation for examining and licensing applicants would be made available to the boards.

Now, while the legislation in the other States may not be so objectionable, may we not with equal certainty expect to find in the boards almost as strange and as improper an admixture of empirics and of the representatives of scientific medicine? And of the latter class who will consent to serve in such a mixed board, may we hope with any degree of assurance to find the names of the best qualified and most worthy representatives of our profession, as there should be? Such men would necessarily be excluded from these boards.

From this field of observation of the relations of the medical profession to the political power of the land, we may very profitably turn to a wider and more extensive scope of observation—the relationship which the General Government has sustained to it. It is well known that the General Government has never encouraged the study and investigation of scientific medicine. On the con-

trary, it has done much to prevent and discourage it, but not, as I believe, as it is sometimes alleged, with consciously hostile purpose. The colossal fortunes which the manufacturers of patent medicines have made are, we all know, due directly to the protection afforded under the patent-right law, of the United States; and this discrimination in favor of empiricism and quackery is sometimes pointed to as evidence of an unfriendly sentiment towards scientific medicine. An additional evidence of this spirit on the part of the General Government is thought to manifest itself in the heavy Custom-house duty laid upon medical books, and surgical instruments and apparatus. In the first instance the General Government does seem to have become the fostering guardian of empiricism. While in the latter instance, the burdensome tariff put upon the necessary means and appliances for the study and practice of scientific medicine, by the General Government, appears to many as both an embargo laid upon the cultivation and advancement of medical science, and as a premium upon professional ignorance and inefficiency.

These evidences of a lack of interest on the part of those in civil authority in this country, are, however, only such in appearance. It would be wrong to construe them as decisive proofs of an inadequate appreciation of the regard and honor due our profession for the benefits conferred by it upon the public. The true and philosophic explanation of this apparent indifference to the cause of scientific medicine on the part of our rulers is to be found, strange as it may appear, in the character of our government, and the political isolation of our country arising out of its geographical position. Our theory of government is incompatible with any unnecessary restriction of the personal liberty of the citizen. Its design is to develop the habit and the capacity of independence in thought and action upon the part of every one. Therefore, in the choice of his medical adviser in sickness, as in the selection of the occupation he shall follow, or the religion he shall embrace, or the vote he shall cast, it will be equally difficult for the State to claim and exercise as its right, any controlling influence whatever, and there is nothing to found such a claim upon, except the assumption of too great ignorance and incompetency in these matters upon the part of the people. Therefore, however ignorantly the public may act in the exercise of these inalienable rights, as they have always been regarded, it is idle to suppose they will be surrendered at the request of the American Medical Association to do so. All efforts to control the citizen in such matters will prove in the end utterly futile.

And, so far as any great National interests are concerned, there is no really urgent need for any such restrictive interference with individual rights. Our geographical isolation constitutes our main

National protection against becoming involved in foreign wars; and therefore numerical strength of population, as an element of military power, does not figure largely in the estimate of the resources necessary for National independence. Hence the different values put upon human life and health in the old countries of Europe, as compared with their valuation in this country. The large losses of life yearly incurred among us from criminal accidents, wilful murder, from preventable causes of disease, and from incompetent medical service for the public, cannot seriously affect our war-making power. This fact fully explains the apparent negligence of our country and rulers as to the lives and health of the people; and, as contrasted with the different treatment of this subject by the monarchical powers of Europe, they seem to be very culpable indeed. It cannot, therefore, be very apparent, either to the medical profession or to the American politician, that the restriction of medical education and practice by legal enactments is a necessary measure of State policy.

Very differently, however, does this problem confront the ruling powers of Europe. With them, the study of the problem of vital statistics is an absorbing and an all-important one. It is a dire necessity of existence and perpetuity with each one of these countries, to maintain the fighting strength of the nation at the highest possible maximum of its capacity. This it is which gives character to these monarchical, or so-called paternal governments in their relation to the education, and the control of the service and occupation of their people. It is a restraining and moulding influence, which surrounds the subject from the cradle to the grave, like the atmosphere which he breathes. The accouchement which gives him birth, and his vaccination and baptism, are provided for by government officials, each in quick succession. The subject is now ready to be ticketed and pigeon-holed in the archives of the government, which thenceforward is ceaseless and relentless in the exercise of this so-called paternal care, the ultimate end or object of which is military service for the State, if need be, during all the years of his active manhood.

To such an extent is this coddling and caring for the lives of individuals carried, that an American is often amused and annoyed by turns, while traveling in Europe, when he finds himself carefully locked in and guarded to prevent his falling overboard and thus killing himself while the train is in motion. To us, this precaution and anxious care looks very absurd, and it is referred to only for the purpose of illustrating the very great difference in the estimate which is necessarily put upon human life on the two different continents of the civilized world; and also the diverse relations which the State must, as a logical consequence, assume in its relation to the control of medical education and practice.

In addition to the necessary differences growing out of our geographical and political isolation, must be considered our theory of self-government, as it will bear upon the discussion of our subject when it is fully and finally presented to the public. The average voter, while he may be incompetent to make the wisest choice for himself in the selection of his medical adviser, is not ready to acknowledge his incompetency and have a guardian appointed by law, who shall think and act for him in this matter. And just here, there is a fatal fallacy in the arguments of the advocates of these restrictions upon private rights. They seem to have lost sight of the fact that ours is, to use a popular phraseology, "a government of the people, by the people, for the people," and that the State Board of Examiners must ultimately represent the ideas, whatever they may be, of the people themselves. They forget that the stream can never rise to a higher level than its source; and that legislative restriction of medical education and practice will be attended with only such results, good or bad, as the intelligent or misguided wishes of the laity may determine; and that if the laity are capable of making sufficiently wise laws in regard to this interest, and can secure their faithful execution, they then can have no need of the protective guardianship of such laws and public officials. And on the other hand, if they are not thus capable, the real interests of scientific medicine cannot be promoted by any sort of alliance between the medical profession as a body, and the political partisan organizations of this country.

The movement to secure this restrictive control of medical education and practice is one of imitation; the idea having been imported from Europe, like too many of our ideas of reform in manners and education, irrespective of their suitability or adaptation to any special needs of our country or people. The American medical profession can do better, we might hope, than to follow in the wake of the servile fashion of the day, of adopting ideas merely because they happen to be transatlantic. The American Medical Association, in the declaration of the purposes and ends of its organization, to which reference has been already made, has clearly and definitely marked out the lines of action upon which the profession, in my judgment, can, as a body separated from all political control, succeed best in promoting its highest interests,

This National Association of the profession, widely extended and admirable as it is in its organization and equipment for active work, has by no means been completed or made perfect. Unfortunately, in recent years, the harmony and amity of its councils have been unnecessarily disturbed, and its usefulness thereby somewhat endangered. Certain disorganizing tendencies have recently made their appearance, which might have

been avoided; and, as it is possible yet to avert the threatened danger, I trust I may be allowed to speak out plainly and say that I refer to the "New Code controversy." It would be useless and presumptuous in such an address to refer to it, unless to offer a remedy for its cure. To my mind, there is a very simple and easy way out of the difficulty. It is this: The so-called "consultation" which takes place between the general practitioner and specialist, is in reality no consultation whatever in the proper and fair interpretation of the term as contained in the law of the Code, regulating consultations. The transaction is, more properly speaking, the surrender of a patient on the part of the general practitioner into the hands of the specialist, whom the former, to be consistent, must regard as having better special qualifications to treat. In the very nature of the transaction, there cannot be any such discussion of the case as is contemplated in the law of the Code regarding consultations. If this view of the real nature of a consultation is correct, the claims of the "New Code party" might be allowed, and differences harmonized. This tendency towards disorganization having been successfully repressed, if then the entire American medical profession could be properly organized, in every county throughout the Union, into auxiliary associations of the American Medical Association, there could be no need of any outside interference on the part of the State in carrying out the great mission of this Association. It would then be able to give such "*frequent, united, and emphatic*" expression of the views of the profession" as would enlighten and direct "public opinion in regard to the duties, responsibilities, and requirements of medical men," beyond anything which could be hoped for from medical education bills as executed by the average State Board examination of applicants. A National organization, harmonious and united, and embracing the entire medical profession of the country found worthy of membership, would be able to evoke concert of action on the part of the profession and laity, and voluntary coöperative efforts for "supplying more efficient means than have hitherto been available for cultivating medical knowledge," and "for elevating the standard of medical education." By means of such a union of forces and interests, a great advance might be made at once in a negative way, in clearing out of the way of onward progress the legislative obstructions of the United States tariff law, and protection afforded to patent medicines, to which allusion has been already made. These results accomplished, there is no reason why some of the enormous idle wealth of the Nation, both private and public, should not be made available in the endowment of many of our best schools of medical education, having fellowships for the purpose of special study and investigation in the va-

rious departments of the science of medicine. If a sufficient number of our best schools were thus liberally endowed, to render them independent of the patronage of pupils, a much higher standard of medical education could be held up to invite and encourage among all the schools and pupils of the country a higher degree of honorable rivalry, in the excellence of their degrees, than could be expected of the State Board of Medical Examiners, whose conditions or terms of license would be leveled down to a horizontal line, which line would necessarily be the minimum or average attainable qualifications of applicants.

There are now in active operation a few of the older schools in this country whose conditions of graduation are, and for many years have been, unattainable by such applicants as could only pass the State Board examinations. This would tend to impair the growing appreciation and value placed upon the diplomas from these schools by both the laity and the medical profession, inasmuch as, under the new *régime*, the State's license is to take the place of the college diploma, both as a credential of qualification and as an authoritative commission for practice. By placing the degrees of such schools in a subordinate relation to the State's license, to some extent their moral influence over the profession will be impaired, and the high ideals which they had heretofore held up for exciting emulation on the part of other schools of subordinate rank, and among the individual members of the profession, will to some extent be withdrawn.

In as brief space as possible, I have thus endeavored to present and discuss the principal propositions contained in the question which I have adopted as a theme for this address. It is one which, it is to be hoped, will receive a painstaking and thorough investigation upon the part of the profession, and that radical changes will not be effected without sufficient deliberation. A hurried and partial discussion of it by the profession may result in that sort of legislation which so often proves to be a sharp two-edged piece of cutlery in the hands of the hapless party using it, and for whose defense it was intended.

From these various propositions, as argued, I would respectfully submit the following conclusions:

1. Legislative restriction of medical education and practice in the first quarter of this century, as established by the friends and exponents of legitimate medicine, was a failure, and the causes by which this failure was brought about, are still in active operation.

2. The present movement can hardly hope to secure the restoration of such absolute control of legislation now as was enjoyed in the epoch of history just mentioned. Any general system of legislation that can now be secured must, in all likelihood, be so framed as to provide for examin-

ing boards composed not only of the regular profession, but of all the popular crazes, or "isms" and "pathies" of the day. These will inevitably demand and obtain full recognition in the appointments to these boards. To this it is to be hoped the American medical profession is not ready to give its consent.

3. The doctrine of "the survival of the fittest," as a test of superiority, is one which legitimate or scientific medicine should be ready and willing to have applied to itself and its spurious counterfeits. No considerations of self-interest, or mawkish sentimentality about "protecting the masses" from the consequences of their "lack of wisdom" ought to be interposed. The people themselves need to learn the lesson of "judging of the tree by its fruits."

4. Finally. The completion of the organization of the National Association *as originally designed*, and a more perfect unanimity and harmony of all its elements, are the pressing needs of the hour. These good ends accomplished, it could, as a voluntary and independent organization, exert an influence in elevating the standard of medical education and practice, in my humble judgment, not possible of attainment in an alliance with political powers, such as the advocates of the present movement are seeking for it.

Before taking my seat permit me to thank you, gentlemen of the Central Kentucky Medical Association, for the honor and pleasure which I have enjoyed in the discharge of the duties of President of this Society. I can offer you no better return than to wish you a continuance of your past honorable and successful record as a Society, auxiliary to the American Medical Association.

## INFANTILE CONVULSIONS.

*Read by invitation to the McDowell Medical Society; Annual Meeting at Henderson, Ky., November, 1888.*

BY I. N. LOVE, M.D.,  
ST. LOUIS, MO.

The subject of infantile convulsions is not a trifling one, as one of the first stories I heard related after my entrance into the profession regarding one of the numerous "Doc. Sifers" of the early times would indicate. This traditional boaster announced that, if he could only turn any case he was called to into "fits" he was safe, as he was "h—l on fits."

The majority of cases to which the young practitioner is called are emergencies, and a good percentage of these are the petted darlings of the household in the struggling spasm. It would be superfluous on my part to describe an attack of eclampsia. A simple seizure does not differ from epilepsy, except that the latter is characterized by its chronic course, and sudden recurrence and freedom from fever. It goes without saying that

a convulsion is in itself not a disease, but a symptom of a pathological condition in the organism, and yet that this fact is often overlooked is evidenced by the mortality records of the city of St. Louis, which are made up from the death certificates furnished the Health Department by the legal practitioners of the city, all of whom, under the law, are graduates of Medical Colleges.

In 1886, 441 infants were reported as dying from "convulsions," and in 1887, the number was 437.

It seems to me clear that our first duty is to determine the cause of the paroxysm, and if possible, to remove it, instituting at the same time, efforts towards calming the agitation. Intelligent treatment certainly demands the ascertainment of the cause first, if possible, in spite of the fact that Hensch, the great authority of Berlin, in his text-book, based upon thirty-seven years of metropolitan practice, says: "If you are called to a case of this kind and find the child in convulsions, no time is left to enter carefully into the cause of the attack, and you must immediately begin treatment." After announcing free and almost careless administration of chloroform (even leaving it to nurses), as being the sheet anchor, he says: "As soon as the convulsions have ceased, the cause of the disease must be taken into consideration."

The fallacy of this statement can best be illustrated by the following case: Joseph M., æt. 18 months, September, 1883, at 3 P.M., taken with spasm; physician summoned, who administered chloroform during continuance of attack of more than half an hour, at the end of which time the child became quiet, and bromide and choral were ordered to be given to prevent a recurrence. Medical attendant left, assuring family that the child was all right, but that he would return that night and visit it. One half hour later convulsions returned with increased violence and on being summoned I at once placed my thermometer in the rectum and discovered a temperature of 107. A cool bath promptly relieved the spasm, having reduced the temperature; the child remained asleep and tranquil for two hours. The nervous symptoms again pointed towards spasm; the thermometer in the rectum marked 105; another bath relieved the trouble. The case developed into a malignant scarlet fever and death was the result.

Whatever be the cause, whether light or serious, it should be removed as promptly as possible. The chronic tendency to convulsions known as epilepsy has much of habit in it; each succeeding fit that comes prepares the brain for another, and the trivial convulsion, whether caused by indigestion, dentition, fright, excitement or high temperature, unchecked at its first onset, may develop the chronic epileptic or the idiot.

Heredity is a very important factor.

Some children, on the slightest provocation, may be thrown into a convulsion; with such the parents have been, as a rule, similarly affected. Bonchut relates the history of a family of ten persons, all of whom suffered in their youth from convulsions. One girl of this family married, gave birth to ten children, and nine of these suffered from eclampsia.<sup>1</sup>

The majority of convulsions of infantile life are of reflex origin, owing, no doubt, to the predominance of the spinal over the cerebral system in early life. As the brain develops and becomes better organized, increasing in size and power, and diminishing in friability and sensitiveness, convulsions become more rare in occurrence.

A brief reference to the various disturbances entering into the causation of infantile eclampsia is in order.

The first essential is the neurotic diathesis; a weakened nervous system and consequent increase of irritability dependent on loss of blood, malnutrition, expressed by anæmia, loss of flesh, rickets, malformation and defective ossification; or the diathesis may be due to inheritance from an hysterical, highly nervous or epileptic mother, or a drunken father, or from tuberculous parents, whose children are imperfect in their development and nutrition of nerve tissue.

A complete knowledge of family history, with proper effort exerted to remedy this defective equipment, in the way of good, fresh, pure air, sunshine, tranquil, unexcitable life, with judicious training and moral restraint, will accomplish much, and we may be rewarded with a superb specimen of physical, mental and moral manhood in the end. It is no doubt true that in many cases this treatment of our little patient, as Oliver Wendell Holmes would say, should have been begun a century before; yet, with constant and increasing watchfulness, we may accomplish much, though we start late.

With other conditions favorable, teething with angry, engorged gums, and the frequent accompaniment of disturbed digestion, may be a potent cause of convulsions. A free incision of the swollen gum may be all-sufficient, but if the irritation be great, the careful bathing of the gum with ice or a 5 per cent. solution of muriate of cocaine will be desirable.

One of the few positions taken by my esteemed friend, Dr. J. Lewis Smith, of New York—whom we all love and honor—which I cannot accept, is that wherein he decries the importance of the teething process.

One who has in later life, in spite of a well developed nervous system, suffered from the acute irritation of an erupting wisdom tooth, can best realize that cutting teeth is no child's play to the delicate and sensitive baby.

Gorging the stomach with improper food has

<sup>1</sup> Vogel.



been known to completely demoralize a healthy adult. The effect upon the sympathetic nervous system of a little one is pronounced, the means of relief obvious; emesis; enemata (of a drachm of warm glycerine); calomel purge; aids to digestion; careful selection and limitation of food. Infants should be guarded against constipation, and to this end nothing surpasses the following:

R. Tr. nucis vom . . . . .	5ss.
Tr. belladonna . . . . .	gtt xv.
Aloin . . . . .	gr. ss.
Alcohol . . . . .	ʒj.
Elix. lacto-peptin . . . . .	ʒi.
Glycerine . . . . .	ʒiij.
Syr. simpl. . . . .	5ss.

Sig. Teaspoonful at bedtime or, if need be, twice daily.

No doubt the cases of convulsions referred to the anger or emotional excitement of the mother or wet-nurse are due to indigestion occasioned by the change in the milk nursed.

Worms are charged with being a frequent cause of eclampsia, but the testimony of Hænoch is to the effect that he had never seen a case which could with certainty be traced to worms.

My own observation, while by no means as extensive, corresponds with this writer.

Intestinal worms are a reality, however, and anthelmintics should not be ignored.

High temperature occasioned by the initiatory stages of the eruptive fevers, pneumonia, pleurisy, enteritis, meningitis and malarial or typhoid fever, is a frequent cause of convulsions, but this can be promptly ascertained by the use of the thermometer, and after which the course to pursue is well defined. Not the traditional bath of mustard and hot water, but the cooling bath and possibly the wet pack. We should put out the fire, not feed it. In this connection I recall two cases, reference to one of which will be sufficient:

M. A., æt. 3, December 24 coasted with nurse entire afternoon, and the pleasure was rudely terminated by the child being terribly frightened by the sled being permitted to carry her under a bridge which was dark and forbidding. She was put to bed in the regular way, having eaten an unusually light supper, in a room adjoining the mother's, with light turned down. At 9 o'clock mother heard child breathing stertorously, and discovered her in convulsions, her skin very hot, face red and flushed. The physician summoned, put her into an intensely hot bath with mustard and renewed the water time and again, as the convulsions lasted over an hour and a half, and then ceased, the attendant announcing to parents that she was all right, as he had stopped the convulsions; not realizing that the muscular contractility was exhausted, and hence the stoppage of spasms.

On entering I found that no history had been elicited, no temperature taken, and I soon discov-

ered that the thermometer registered 109° Fahrenheit, and when I informed the doctor that, in my judgment, the child would die before morning, he would not believe it. The family were cruelly awakened from their false hopes and the child lived but a few hours.

I am free to say that, in the majority of cases, I think the hot mustard bath an injury rather than a benefit. Every child in convulsions should be at once stripped, and whatever else be done, the thermometer should be at once used, preferably in the rectum.

Having eliminated high temperature, indigestion, worms (?), teething, the possibility of irritation being caused by foreign bodies being introduced into the entrances of the various canals, should be remembered. The ear should be examined, not only for foreign bodies, but also for possible interior inflammation. A recent history of scarlet fever may develop suppression of urine and uræmia as the trouble. Remembering that tubercular meningitis (according to high authorities) is a most frequent cause of infant mortality, it should not be lost sight of; indeed, I think meningeal tubercle a frequent cause of convulsions in ill-nourished children and did time permit, I would cite several clinical illustrations from my case-book. I am firmly convinced that the post-mortem evidences would favor the idea that many more poorly fed babies die from tubercle in the brain than we imagine.

The relation between an elongated, narrow, adherent prepuce, with the consequent inflammatory disturbance dependent upon accumulated secretions, and reflex convulsions, should be recalled to mind and, if the conditions demand, circumcision should be promptly performed.

Among obscure causes of well defined infantile convulsions which may be overlooked, there occurred under my observation the case of a two months' child which had been banefully affected by belladonna carelessly applied, in the shape of belladonna ointment to the breast of the mother by the nurse without the knowledge of the physician.

As a very unusual cause of fatal eclampsia, I recall the bottle-fed infant of a morphine eating mother which I innocently, but ignorantly, permitted to die in convulsions occasioned by cerebral disturbances which might have been relieved by the administration of the proper amount of the drug necessary to meet the demands of the morphine habit which it had inherited.

Undoubtedly the congestion occasioned by a malarial seizure is a frequent cause of convulsions, and in plethoric children we should not lose sight of the value of leeching over the temples and behind the ears.

I desire to emphasize the following points:

1. We must not lose sight of the fact that a convulsion is only a symptom and not a disease.

We must promptly determine the cause and then intelligently and energetically eliminate it.

2. We can probably classify the majority of cases of infantile convulsions as being caused by ill-fed nerve centers (rachitics and victims of tuberculosis), reflex irritations and cerebro-spinal engorgements and congestions, dependent upon the high temperature incident to the poisons of malaria, the infectious diseases and narcotics.

3. As we can make a triple classification in the etiology, it follows that we should have a similar division in the matter of treatment, and succinctly stated, we may designate the latter as, (a) nutritive and constructive, (b) a removal of all irritation from the sympathetic system; antiphlogistic, eliminative, cooling and sedative.

4. While calming the fears of the agonized parent whose child is taken with a spasm, by assurances that an infant rarely dies in this manner and causes the most insignificant sometimes occasion the disturbance, we should not fail to impress them with the fact that it is a serious matter, that the best possible way to treat the convulsive diathesis is a perfect hygienic regimen, prevention by good food, proper clothing, fresh air and sunshine, plenty of sleep and avoidance of all excitement.

5. In discovering a child in an eclamptic paroxysm no one article is more essential than a well tested thermometer (it being practically the doctor's sixth sense, which enables him to go far toward making a diagnosis), and the only proper place for locating it in ascertaining the degree of fever is in the rectum, leaving it *in situ* not less than three minutes.

6. For the prompt quelling of a spasm, chloroform by inhalation is a most valuable remedy, but it should be used carefully and not too early, as it may serve as an agent to mask the true condition of the patient, the hiding of the danger signal kindly thrown out by Dame Nature.

7. In the cooling bath we have a prompt and potent agent for quelling the riotous condition of the cerebro-spinal system. Not the sudden ice-cold bath, that borders on the brutal, but water in the beginning about the temperature of the patient and gradually reduced to 70° or 60° Fahrenheit, and possibly lower if the indications call for it.

8. In acetanilid I am sure we have a most valuable remedy for the relief and prevention of convulsions. Clinical experience for one year justifies the conclusion. The drug is rapid, usually beginning to manifest itself within an hour, and not infrequently within twenty minutes; its full effect reached in four hours.

Pulse and respiration are slowed, arterial tension rises, diuresis and diaphoresis occur, pain is relieved and sleep usually ensues. No very great amount of depression follows if given carefully, but an exanthematous rash now and then accompanies its administration.

In confirmation of my own experience of its value in the convulsive diseases, I note the fact that Dr. H. H. Moyer, in the *London Medical Recorder*, of August 20, 1888, reports favorably on its use in epilepsy, in 5 grain doses, three times daily.

## MEDICAL PROGRESS.

CALATRAVENO: ALIMENTATION FOR CHILDREN WHEN LACTATION IS DEFECTIVE. (*El Prog. Gin. y Ped.*, October 10, 1888.)

The author's paper was read before the Pediatric Section of the National Gynecological Congress recently held at Madrid, his conclusions being the following:

1. The alimentation of children during the first period of life is the greatest problem in pediatrics. According as the nutrition is good or bad do we obtain modifications of temperament and character, healthy and robust children or the opposite, and such as will be useful or otherwise to the community.

2. A bad alimentary regimen, and the abuse of milk and farinaceous foods, result in malnutrition and death, with the appearance of the various symptoms which have been designated under the term *athrepsia* by Parrot.

3. No means of alimentation should be substituted for mother's milk during the first period of life. Mothers owe this duty to themselves not less than to their children, that they should nurse them, if possible. Those who have nursed their children are less susceptible to uterine and ovarian troubles than those who have not.

4. It is the duty of the physician to decide, in the families in which he is an attendant, what women are capable of nursing their children, and what ones are incapable, on account of debility or disease.

5. The best substitute for the mother's breast is that of a wet-nurse residing in the home with the child. But the antecedents of the wet-nurse as to syphilis, alcoholism, and scrofula must be clearly ascertained.

6. The nursing-bottle should be used if mother's breast and wet-nurse fail, but it must be used with the greatest care, absolute cleanliness and sweetness being indispensable, and only such mixtures should be used in it as will be entirely suitable and nutritious.

7. Asses' milk is most suitable if animal milk must be used; goats' and cows' milk may be used if the former cannot be obtained, being properly diluted with farinaceous food of a proper character during the first few months of their use.—*Archives of Pediatrics*.

THE NEW ANTISEPTIC, CREOLINE.—Creoline

in solution of 5 to 100 possesses the property of causing the rapid disappearance of the odor from foul ulcers and gangrenous wounds, also the disagreeable odor from epitheliomata of the uterus. This substance is an antizymotic and microbicide, and it has been found to arrest the development of bacteria. The solution of liquid creoline, 5 to 100, is more active than the "liquor of Van Swieten" or the solution of carbolic acid of the same strength. It has been shown by experiment that septicæmia of intra-uterine origin is ameliorated by washing the cavity with creoline solution, the temperature is lowered and the febrile symptoms disappear, even in cases where carbolic acid and corrosive sublimate have failed.

Under the influence of creoline, in torpid wounds, the fungus granulations receive a veritable stroke of the whip (*coup de fouet*). It increases the activity of the separation of sloughs and eschars more quickly than any other antiseptic. In support of this conclusion the authors (Tzonciu and Georgesco) cite a case of disarticulation of the scapulo-humeral joint, from a railway accident, where there was great tearing of the skin and fibrous textures of the joint, but which healed on the sixteenth day; and another case where Alexander's operation of shortening the round ligaments was performed, in which there were numerous varicose veins. This operation was followed by sloughing of the wound, but the condition of the wound was modified by the substitution of creoline solution for that of carbolic acid, which had been used since the operation.

In open (compound) fractures, or in wounds of the cavities, this agent has been very successful.

The solution of creoline of 5 to 100 gives effects much superior to those resulting from the employment of iodoform or iodol, in the treatment of ulcers and chancres.

Creoline when used internally has no toxic effect in moderate doses. A patient has taken 50 centigrams a day for several days without inconvenience. In a case of chronic enteritis, Thomco has administered 50 centig. a day for four days, and the patient recovered. This substance, then, is indicated wherever an antiseptic for the alimentary canal is required.—*Archives Roumaines, de Médecine et de Chirurgie*.

**STRYCHNINE AS AN ANTIDOTE IN NARCOTIC POISONING.**—DR. G. A. GIBSON, in *The Practitioner* for December, 1888, recommends a change in the treatment for narcotic poisoning as given in the text-books. The chief indications, he says, are, first, to remove any of the poison that is within reach, by siphon tube or emesis, and, next, to keep the vital centers in a state of activity, while at the same time doing nothing that can in any way cause exhaustion of any part of the system. The current methods of keeping the patient

awake are reviewed and that of enforced walking condemned as wearing on the vital powers. Keeping the patient in a horizontal position, the respiration is to be carefully watched and if there should be the least sign of irregularity or shallowness or inequality in the breathing,  $\frac{1}{100}$  or  $\frac{1}{50}$  of a grain of sulphate of strychnine should be administered subcutaneously and may be repeated, at intervals of an hour, two or three times. Danger from failure of the respiratory centers caused by general anæsthetics is also met by the strychnine treatment.

**QUININE IN THE EARLY STAGE OF CROUP.**—The story is told of an old practitioner who was exceptionally successful in the treatment of this malady (croup), and people who heard of his wonderful success travelled long distances to purchase the magic pills, which, it is said, were nothing more than ordinary two-grain quinine pills. In the early stages of croup, say in a child from 2 to 5 years of age, a single two-grain quinine pill given when it is gasping for breath at about 2 o'clock in the morning, will be followed almost immediately by relief. In the course of fifteen minutes, the voice will return, the parents will be relieved of their anxiety, and the doctor can go home and rest contented that there will be no more trouble in that family for the next twenty-four hours.—*Med. Reg.*

**COCAINE POISONING.**—Four grains of cocaine was given to a 4 year old boy in mistake, and DR. NOIZARD reports in the *Revue Mensuelle des Maladies de l'Enfance*, the symptoms and successful treatment. After sleeping for half an hour the child rose from bed with pale face, haggard eyes and difficult respiration. He was perspiring freely, and complained of violent pains and cramp in the chest, the movements soon simulating those of acute chorea. Hallucinations succeeded and the pulse became frequent, the symptoms reaching a climax about two hours after the administration of the drug. Emetics were given, followed by twelve-grain doses of chloral. The symptoms grew less severe, and next day had disappeared.

**A VEHICLE FOR IODIDE OF POTASSIUM.**—DR. A. M. BLAIR advocates in the *Boston Medical and Surgical Journal*, the use of milk as a vehicle for iodide of potassium. He says it completely masks the taste, and does not apparently interfere with the therapeutic qualities. Patients who could not tolerate ten grains when administered in water could soon take forty grains in milk with no symptoms of nausea.

THE Supreme Court of the United States has sustained the decision of the West Virginia Court declaring the medical practice act valid.

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SATURDAY, FEBRUARY 9, 1889.

EDITORIAL NOTICE.

When the writer accepted the position of Editor of the Association Journal, although the Marine-Hospital Service bill was then pending, as it had been for the past ten years, he had no certainty of its passage, but, on January 4th it passed both houses of Congress and became a law, which by prohibiting any original appointments into the service except to the rank of Assistant-Surgeon, has the effect of creating a life tenure in the office of Supervising-Surgeon-General. He therefore tendered his resignation as Editor to the Board of Trustees and it was kindly accepted by them to take effect on a day named by himself. His editorial connection with THE JOURNAL will therefore cease with the present number, and until further notice, the "Committee on General Management" will take charge of the affairs of THE JOURNAL. With the most sincere thanks to those who have sent him kindly letters, his best wishes for the continued success of THE JOURNAL, and the renewed prosperity of the Association, the Editor resumes his life-work in the Marine-Hospital Service.

JOHN B. HAMILTON.

THE VIABILITY OF PATHOGENIC MICROBES  
AND THE LAKE VIEW EPIDEMIC.

*Pari passu* with the separation, and discovery of

new bacilli, knowledge of their method of development, their habitat and peculiarities accumulates. STRAUS and DUBARRY have in corroboration of the experiments of BOLTON, WOLFFHÜGEL and RIEDEL, come to certain definite conclusions regarding the viability of certain now well-known pathogenic germs. They have found the bacillus anthracis alive in water after the 16th, 24th, 28th, 65th and even as late as the 131st day.

The bacillus of typhoid fever lives from 30 to 81 days.

They found the bacillus of Asiatic cholera alive at 16, 26, 30 and 39 days—but it should be remembered that WOLFFHÜGEL and RIEDEL found this microbe alive in river water after 7 months.

The bacillus of tuberculosis was found living at 24, 25, 27, 30, 75, and 115 days, but it was also demonstrated that the virulence of this bacillus became attenuated after a long sojourn in water.

The streptococcus pyogenes lives from 8 to 15 days; the staphylococcus pyogenes aureus from 9 to 24 days; the bacillus of green pus from 20 to 73 days; the pneumo-bacteria of FRIEDLANDER 4 to 8 days; the micrococcus tetragenous 19 days; the microbe of chicken cholera was found living after 8 days, the microbe of the swine plague lived and thrived from 17 to 34 days, and the bacillus of septicæmia was still living at the end of 20 days.

It is found by MM. STRAUS and DUBARRY that a great many of the pathogenic microbes possess the faculty of multiplication and living in water. The bacillus anthracis, for example, will give off spores in distilled water, and it is more than probable that other microbes possess this property.

The practical lesson is that even the most pure water becomes unsafe if it comes in contact with any of the pathogenic microbes, and that, with the single exception of the bacillus of tuberculosis, the microbes are undiminished in virulence by being immersed in water.

What, then, shall we say of the water supplied by the Lake View, Illinois, water-works, where the permanganate of potassium test shows it to be heavily charged with organic matter? If the pathogenic germs will live in pure water, which has been sterilized, how much stronger will be their life in impure water loaded with ammoniacal débris?

We mentioned in the last issue of THE JOURNAL that there was an alleged epidemic of typhoid

fever at Lake View, a suburb of Chicago, of about 50,000 inhabitants. It appears that there are three sewers emptying into the lake within 1,000 feet of the water-works, and that there are now more than one hundred cases of typhoid fever within its corporate limits. Unless some active measures are soon taken in the matter of disinfection of the excreta, the cases will increase in arithmetical progression.

It is somewhat singular that near the close of this nineteenth century, with all the light on this subject with which the world has been flooded, we see a considerable epidemic of typhoid fever, in which no water analysis has been made, no bacteriological examination undertaken, and a health officer deliberately stating in the public prints that there are only eighty-six cases, and it is not much of an epidemic after all! There should not be *eighi* cases, of a purely preventable disease, and the city council should now pass an ordinance requiring compulsory notification, and disinfection of all dejecta from the sick. And while they were about it they might give some attention to the securing of a good water supply.

In speaking so positively on this point, we are not unmindful of the theory of Pettenkofer, which is, in brief, that the propagation of this disease is made by the emanations from contaminated soil, and that the germ finds its way into the system through the air passages, but this doctrine does not have any considerable number of adherents, and while the majority of the profession admit the occasional production of the disease in this way, they are practically agreed that the germ arrives in the system, through the drinking of contaminated water, in ninety out of a hundred cases.

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#### DR. OLIVER WENDELL HOLMES AND THE BOSTON MEDICAL LIBRARY.

An Associated Press dispatch of January 30th stated that DR. OLIVER WENDELL HOLMES has given his private library, now a great one, to the Boston Medical Library. This library, although less than fifteen years old, is only less in size than the great medical library in Washington, and DR. CHADWICK, under whose fostering care it has grown, may well felicitate himself on its phenomenal success.

The library in moving into its new quarters on

Boylston St., about a dozen years ago, was formally dedicated with appropriate ceremonies, and the address of the occasion was made by Professor Holmes. There was a pleasant gathering of the older members of the profession, medical gentlemen from other cities, as well as the younger element of Boston, and the address was inimitable. The Professor stood in his simple, easy unaffected way, and apparently without effort, delivered his oration, and as he stood there, his clear sweet voice never sounded better even in his younger days, and he made a pleasant picture to see, as almost unconsciously he smacked his lips in quoting a favorite author, or describing the beautiful printing and exquisite binding of certain books of a past age. A literary *gourmet*, one would say as the Professor's face shone with such unalloyed pleasure when dwelling on the bright thoughts in the pages of an old companion. But no one could say DR. HOLMES ever loved a book because it was a book. His heart is only touched, or his interest aroused by the sentiment, or the truths therein recorded. And the audience that heard him that night, went from the doors of the new building, more than ever resolved that the Autocrat, was indeed Autocrat, and that by common consent. The imagination might even for a time dwell on the sentiment that the portraits of Warren, Boylston and Waterhouse adorning the walls, were enjoying the enlivening scene, and that the manes of these departed worthies were receiving most precious incense.

DR. HOLMES has fought the Homeopathic heresy all his life and was one of the earliest members of the American Medical Association, and some who sat at its sessions forty years ago will be happy to grasp his hand at the Newport meeting, and many of his old students, and others who know his heart from the thoughts he has put on paper, will be proud and happy if this New England meeting shall give them the opportunity to have a glimpse of his face.

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#### EDITORIAL NOTES.

A NOTABLE ADDITION TO MEDICAL LITERATURE.—We have received the first number of the *Archives de Médecine expérimentale et l'Anatomie Pathologique*, published in Paris by G. Masson.

The nature of this publication, which is to be

issued bi-monthly, is indicated by the table of contents :

1. Straus and Dubarry: Researches on the Duration of Life of Pathogenic Microbes in Water.
2. Grancher and Deschamps: Researches on the Bacillus of Typhoid in the Soil.
3. Lépine: Action of certain Antipyretics on the Consumption of Hydrocarbonaceous Substances.
4. Joffroy and Achard: Contribution to the Pathological Anatomy of Acute Spinal Paralysis of Children.
5. Hyppolyte Martin: Note on the Cultivation of the Bacillus of Tuberculosis.
6. Launegrace: Influence of Cortical Lesions on the Sight.
7. Darier: Contribution to the Study of Epithelioma of the Sudoriparous Glands.
8. Troisier and Ménétrier: Histology of "Vergetures."

The "*Archives*" is well illustrated and is under the direction of Charcot, assisted by Grancher, Lépine, Straus and Joffroy. We predict for it an immediate success.

**THE TENNESSEE STATE BOARD OF HEALTH.**—Governor Taylor in his message to the Tennessee Legislature says that the State Board of Health, which modern science has demonstrated so valuable and necessary in the administration of a well organized state, should have a contingent fund at its disposal. Experience has, he says, time and again demonstrated that success in combating those epidemic diseases which in the past have swept over the State like cyclones, leaving death and desolation in their tracks, and demoralizing and destroying commerce, is attained in proportion as such efforts are early, energetically and intelligently made, and to enable the Board thus to act, such a fund should be provided. A contingent fund which is honestly applied is a very necessary aid to a State Board of Health. But where diverted to making political capital for candidates for reelection to office, it had better be left in the State treasury subject to emergency calls on the Governor. These remarks do not apply to Tennessee.

**TEMPORARY SUSPENSION OF A FRENCH JOURNAL.**—Owing to the poor health of Dr. Meniere, of Paris, the publication of the *Gazette de Gynecologie*, of which he is editor-in-chief, has been provisionally suspended and his hospital clinic

closed. He has also been forced to materially limit his practice.

**YELLOW FEVER IN CUBA.**—Seven deaths are reported in Havana for the week ending January 12. The health of Santiago de Cuba and Cardinas de Cuba is reported as good, no fever existing at either place.

**HEALTH IN THE BRITISH NAVY.**—The statistical report on the health of the British Navy for 1887 has just been published. During the year the average strength of the service afloat was 48,410, the deaths 403, invalids discharged the service 928, and the mean daily sick list 2,133; ratios of 1,019 cases, 8.32 deaths, 19.16 discharged invalids, and 44.06 daily sick, per 1,000. Of the deaths 80 occurred in the wreck of the *Wasp* in the China Sea, deducting which the death rate equals that of 1886.

**ENGLISH PHYSICIANS IN SWITZERLAND.**—The English residents in St. Moritz, Switzerland, have presented a purse of \$250 to Dr. Holland, who was fined \$100 by the local Sanitäts Rath for practicing among his compatriots without a Swiss license. The objectionable law was modified and permission granted qualified foreign physicians to practice in the country by the Grosse Rath.

**THE TEMPERATURE OF THE SICK ROOM.**—The death of Lord Beaconsfield was attributed to an accidental fall in the temperature of his room. Dr. Wilberforce Arnold suggests, in the *British Medical Journal*, the invention of an alarm thermometer which shall give warning to those in attendance upon the sick of any serious variation in the temperature of the room. The automatic regulation of temperature has been accomplished by American inventors, and is now a commercial enterprise in the United States. The desired degree is maintained by means of a thermostat and set screw.

**INTERVIEWING AN OPHTHALMIST.**—A well-known ophthalmic surgeon of London has "suffered himself to be interviewed" by the representative of one of the enterprising evening papers there, in regard to professional subjects, and the *Lancet* regrets the fact, though "the replies he gave to his interviewer were, it is true, in highly general terms, to which no particular objection could be taken."



## SOCIETY PROCEEDINGS.

## Obstetrical Society of Philadelphia.

*Stated Meeting, Thursday, January 3, 1889.*THE PRESIDENT, T. M. DRYSDALE, M.D.,  
IN THE CHAIR.DR. H. A. KELLY exhibited the specimen of a  
CARCINOMA OF THE CORPUS UTERI.

Mrs. F., æt. 45 years, married, applied to him in October, 1888, for the relief of persistent uterine hemorrhage. She was the mother of two children, twenty-three and nineteen years ago. Her health was good until 1886, when the present trouble began as if menstruation was appearing too frequently. The discharge soon became constant. There was a marked anæmic, sallow cast of the skin, and she suffered from an agonizing pain in the right ovarian region. The uterus was anteфлекed, very large, measuring  $3\frac{3}{4}$  inches in length, choking the pelvis, emitting a sanious, fetid discharge. She was admitted to the Kensington Hospital, and a handful of débris looking like a sloughing fibroid removed by scraping. This proved to be cancerous and, in the presence of Drs. D. Emmett, Vanness and Gramm, assisted by Dr. H. Robb, Dr. Kelly removed the uterus by vaginal hysterectomy. The operation was done with great difficulty owing to the great size of the uterus. He tried to follow the plan advocated by Dr. Dudley, of Chicago, of clamping the vessels, but the uterus was too large and he could not introduce his finger and fix the clamps at the same time. The right side was freed first, the uterus delivered and the left side pulled without the vagina, and the left broad ligament tied off; the uterus was the size of a three months' pregnancy. The vagina was packed with iodoform gauze, which was renewed in a few days. The ligature did not all come away until several weeks had elapsed. The uterus exhibited the specific difference between cancer of the corpus and of the cervix uteri. When first removed, the inner surface of the uterus was covered with a greenish slime, very fetid. The whole mucosa of the body was a mass of polypoid excrescences of variable size. The uterine ends of the tubes were not affected with the disease, nor was the cervix.

DR. KELLY also exhibited two large sarcomatous ovaries removed from a woman æt. 43. She had a marked cachetic appearance, suffered with knife pains in the lower abdomen, and had had metrorrhagia for sixteen months. He found two large irregular masses in her abdomen, which were obscured by fluid in the peritoneum. The uterus was jammed against the symphysis. At the operation, after tying off a number of omental adhesions to the right mass, it was found to be a soft,

friable tumor, with a sessile attachment involving the whole broad ligament. The tumor broke down and bled profusely upon raising it. The broad ligament was quickly tied off by an interlocking series of interrupted sutures. The lateral wall of the uterus continued to bleed actively, and he had to resort to the device which has saved lives for him on several occasions. The cornu uteri was caught in a pair of bullet forceps and raised forcibly up into view, and carried over to the left side, while he passed a stout ligature in the cervical region deep through the uterus, with a view of tying the uterine artery. This checked the hemorrhage. The tumor behind the uterus came out in handfuls, leaving a bare left broad ligament, which was treated in the same way as the right, including the ligature to the uterine artery. A drainage tube was left in and the incision closed. Five hours later he was called to see her and found a steady flow of venous blood from the tube, which had saturated all the dressings. He put her under chloroform at once and cut all the stitches, turned out all the intestines, and found an active flow from a spot in the right pelvic wall. She made a good recovery as far as the local trouble was concerned. The tumors proved to be soft round-celled sarcomata. This is the second case of sarcomatous disease of the ovaries he has operated upon. The first was a young girl of 12. Both cases recovered.

DR. WM. ASHTON exhibited a specimen of

## OVARIAN SARCOMA.

Mrs. Sarah G., æt. 35, was admitted to the Jefferson Hospital on the 27th day of last November. Puberty at 15 years, always regular except when pregnant, up to two years ago, when her last child was born. At this time noticed a small tumor in hypogastric region and to the right side. She was much emaciated. A diagnosis of ovarian sarcoma was made by Prof. Parvin. Through Dr. Parvin's kindness he operated on the woman a few days later, assisted by Dr. Baldy. The tumor was found to fill the whole of the abdomen and was universally adherent. Many adhesions had to be tied, and it was found that the whole posterior portion of the bladder and the anterior portion of the uterus, as well as the fundus, had been adherent to it, and these points of adhesion oozed freely. Ligatures and Monsel's solution were used freely and the bleeding stopped. The whole cavity was then thoroughly irrigated with warm water and the incision closed, with drainage. She died in six hours of shock. An examination of the specimen by Dr. Coplin shows it to be a spindle-celled sarcoma, with points of beginning degeneration and some points of slight hemorrhage.

DR. WM. S. STEWART exhibited

THE CYST OF AN OVARIAN TUMOR, weighing 84 lbs. The operation was performed upon Mrs. —, æt. 61 years. General health good. No marked emaciation. Abdomen enormously

distended; facias ovarianæ very perceptible. He made an incision about 2 inches in length, sac was emptied rapidly by a large trocar. Found general adhesions to the anterior abdominal walls; these were separated by a rapid sponging off, which has proved of advantage in preventing hemorrhage and traumatism. The cyst was delivered as the adhesions were sponged off. Operation lasted forty minutes. No irrigation; no protrusion of bowels or omentum; slight oozing; glass drainage tube; only five stitches needed to close incision. Weight of sac and contents was 84 lbs. He was assisted by Drs. Joseph Price, W. H. Kirk and Dill. Having seen the patient these three successive days, found everything progressing favorably. Temperature normal; pulse 84; respirations 22, oozing about ceased; drainage tube removed to-day.

DR. J. PRICE read for DR. K. STANSBURY SUTTON, of Pittsburgh, a report of

#### OPERATION FOR CONGENITAL DEFORMITY.

Miss A. P. æt. 20, never menstruated. Has severe pain in lumbar region, abdomen and head, every month, but no flow. Vagina short, cervix uteri not felt anywhere, no uterus discoverable by bimanual palpation through the rectum. Often vomits, is unfit for work, is melancholy. Laparotomy December 10, 1888. Uterus unilateral, one horn  $\frac{1}{2}$  inch long, as thick as the first joint of the little finger. On the left side uterus not developed; no lig. lata., no tube, no ovary. On right side small lig. lata., large tube and full-sized ovary, with two distended egg cells on surface. Ovary and tube close to cornea of the one-half uterus. The external genitalia were fully developed, the vagina about one-half ordinary depth and blind at upper end. A note from Dr. Sutton dated January 1 says: Miss P. has gone home well, all of her morbid symptoms, mental in character, are gone. He adds that he has had thirty-four ovarian consecutive operations with one death, and twenty-seven sections for all kinds done with one death. All hospital work.

DR. C. P. NOBLE read

#### A NEW METHOD OF DIAGNOSIS IN OBSCURE CASES OF ENTERO-VESICAL FISTULA.

He had been recently asked by Dr. C. M. Wilson to see a patient supposed to be suffering from fistula. The woman had what is called an ischio-rectal abscess about five years before. Some time after this abscess discharged, she stated that she began to pass wind and small pieces of fecal matter *per urethram*, at irregular intervals. No symptoms of bladder irritation existed. An extensive cicatrix following ulceration produced by a pessary is present in the vagina. It extends along both sides of the vagina and across the posterior fornix (behind the cervix). In view of the absence of bladder irritation, and the well-known haziness of the knowledge of anatomy possessed

by the laity, it was thought likely that, if the fistula did exist, it was recto-vaginal. A careful examination, made by Drs. Wilson, Hawley, myself and others, failed to demonstrate the existence of any such fistula. It occurred to him that the hydrogen gas test would settle the matter quickly and positively. Dr. Wilson forced the gas into the rectum and lighted it at the end of a catheter, introduced into the bladder. No gurgling sound was heard (caused by the gas passing the ileo-cæcal valve); hence communication existed between the bladder and large intestine. Dr. Noble offered this as a new and valuable method of diagnosis in obscure cases of entero-vesical fistula.

DR. C. M. WILSON reported a case of

#### LACK OF DEVELOPMENT OF THE FINGERS AND TOES IN A CHILD DELIVERED AT TERM.

The mother, æt. 25, applied for admission to the Philadelphia Lying-in Charity in active labor. The woman was a primipara, married, a native of Philadelphia, and a housemaid by occupation. She stated that she had experienced no fright or trouble during her pregnancy. She gave a very clear account of her own and her husband's family and no deformity had existed on either side for at least two generations. The child weighed eight pounds, was fully developed with the exception of a lack of the majority of the phalangeal joints of the fingers of both hands and of both feet, the absence of the nails upon nearly every finger and toe, and the web-like folds of skin connecting several of the fingers of either hand together. The appearance of the constricting band on the right great toe would seem to give color to the idea that possibly the deformity was due to intra-uterine amputation. The fact that some of the finger-tips sloughed off after birth would seem to strengthen this supposition. He believed, however, that the deformity was due to lack of development. No history of syphilis on the part of either parent could be obtained.

DR. PARVIN presented the

#### SEXUAL ORGANS OF A YOUNG GIRL,

which he procured in Munich last summer for the purpose of teaching students practically many of the operations upon such organs by the method proposed and pursued by Prof. Winkel—that is, the organ being properly fastened within and upon Schultze's obstetric phantom, many of the more common operations can be made by the student as upon the living subject.

DR. PARVIN also presented

#### AN OBSTETRICAL MANIKIN.

The obstetric phantom shown he had made in Munich and represents a design he had entertained for many years, in fact since the beginning of his obstetric teaching. He wished a complete human form that could be put in the different positions a

woman occupies in labor, natural, manual, or instrumental. The joints are sufficiently mobile so that the model can be placed on the side or on the back, the limbs put in any position desired. The pelvis is of iron covered with leather and has a movable coccyx, while the external parts are made of rubber, which will dilate so as to admit the passage of a foetus. The abdominal cavity is ample for the introduction of two foetuses. One or both may be included in the rubber uterus designed by Prof. Winkel and thus placed in that cavity. Dr. J. Clifton Edgar, of N. Y., then a resident obstetrician in the Klinik, remained in Munich several weeks, after he left, and during his stay superintended the work.

DR. J. C. DACOSTA did not think that "annular hymen" were so very rare. He had seen some cases and among them one that was very marked. The woman had been married two years, had been pregnant and had aborted at four or five months. Coitus was exceedingly painful both to the husband and to the wife, and in the wife was frequently followed by attacks resembling epilepsy. The hymen was "annular," smooth, unbroken and elastic, grasping the finger when inserted like a firm rubber ring. Cutting the hymen cured all the trouble both of husband and wife.

DR. KELLY had made many observation and careful drawings of a number of cases which showed a definite relation between a certain condition of the hymen and the severity of a preceding labor, that is where the vaginal outlet has been broken down with extensive laceration the hymen has remained *intact*, except at the split posteriorly, being saved by the vaginal tear. On the contrary, the surest way of thoroughly destroying the integrity of the hymen was the equable, all around dilatation of a *normal* labor.

DR. B. C. HIRST showed a specimen of

#### ENDOMETRITIS GRAVIDARUM POLYPOSA

from the University Museum.

DR. HIRST finally read the following :

M. M., æt. 39, widow ; has had four children, youngest being 6 years old. Six weeks ago the patient attempted to lift a heavy weight and was immediately seized with sharp pains in left groin. This occurred just at the commencement of a menstrual flow, which was unusually profuse and painful. The bleeding had in fact continued until the present time (Nov. 8). On this day the woman came by a rather long horse-car journey to the Philadelphia Hospital to visit her daughter, a patient in the wards. In the hospital she was suddenly seized with great pain and sank to the ground from weakness. She was carried to the medical wards where an examination showed some form of pelvic or abdominal tumor. She was consequently transferred to the gynecological floor. A vaginal examination showed a mass of considerable extent to the left of the uterus and

apparently a cystic tumor in Douglas' pouch. Laparotomy was done the next morning. As soon as the peritoneum was cut through there welled out of the opening a large quantity of dark colored blood. The incision was enlarged, the intestines turned out and wrapped in a warm towel, a pint or more of blood sponged out and a careful examination made by inspection and touch. The left broad ligament was extended by a tumor, made up as far as he could tell of clotted blood ; near the uterus there was a ragged opening into which he could put the tip of his little finger. During the half hour that the abdomen remained open there was no hemorrhage from this spot, and had evidently been none recently, for there was no fresh blood in the abdominal cavity. His diagnosis, naturally enough, was ruptured tubal pregnancy. As the embryo, if one existed, was too small to give future trouble, and would be absorbed, he simply cleaned the abdominal cavity, picked adherent clots off the intestines and closed the wound without drainage. The convalescence was entirely favorable. He had been inclined since to alter the diagnosis. The woman on close questioning absolutely denied the possibility of impregnation. This fact, together with the history of great muscular effort at the beginning of a menstrual period, and the subsequent behavior of the patient, would naturally suggest the possibility of a rupture of a blood vessel in the broad ligament. The acute attack of pain and weakness two days before the operation might be expected by a rupture of the peritoneal covering with an escape of clots and a fresh hemorrhage into the peritoneal cavity.

The following officers were then elected :

President.—Theophilus Parvin, M.D.

Vice-Presidents.—W. H. H. Gittens, M.D., and J. C. DaCosta, M.D.

Secretary.—J. M. Baldy, M.D.

Treasurer.—Alfred Whelen, M.D.

#### Allegheny County Medical Society.

*Special Meeting, December 18, 1888.*

DR. J. CHRIS LANGE, VICE-PRESIDENT,  
IN THE CHAIR.

DR. DUFF reported

#### A PECULIAR CASE.

I was called this evening to see a girl æt. 13. Two years ago she was down with inflammatory rheumatism. She came home last Wednesday from school, complaining of slight pain in one of her ankles. There was no perceptible swelling, her mother stated, but the pain increased slightly until Saturday, when the other ankle became affected. On Sunday a papillary eruption appeared on the first ankle, and on yesterday morning a

very free eruption appeared on the other ankle. Yesterday afternoon the wrists and elbow on the right side began to swell and to pain her, and simultaneously with the swelling, this papillary eruption appeared on both the joint of the elbow and of the wrist, and about this time the eruption became pustular upon the ankles. This afternoon she was taken worse, and simultaneously with the appearance of the pain, the swelling on the other arm and papillary eruption appeared. This evening I found her with a temperature of  $104^{\circ}$ , pulse 120, pustular eruption on both ankles, and upon the elbow and forearm on the left side there is a mixture of papillary and pustular eruption; whilst on the right arm it is papillary. I do not remember that I have ever seen anything like it. I report it as I found it, and would be glad to have the opinions of others. I have just been asked whether there was any local application made to the parts. I made particular inquiry about that, and the mother stated that there was not, except that she used a little camphor liniment.

DR. DAVIS reported a case of

#### AMPUTATION THROUGH DOUBTFUL TISSUES.

About two weeks since a strong, able-bodied Pole was admitted to Mercy Hospital, this being his history: He was admitted on Tuesday. On the preceding Friday, while coupling cars in a coal works near Punxsutawney, his arm was caught in the coupling and slightly crushed. He brought a letter from the doctor who attended him at the time, Dr. Williams, of Brookville, or Punxsutawney, stating that the blood supply to the hand had no doubt been cut off, and that he had urged amputation, but that the man had positively refused to have this done, and preferred to go to the city and get advice. The bandage on his arm had been probably none too tight; when seen the hand was perfectly black. On looking at the arm, every evidence of gangrene was present. The arm was swollen to almost twice its normal size, with the peculiarly marked discoloration of progressive mortification, with the blistering down near the elbow. The line of demarcation had extended over the top of the shoulder. The resident at the hospital, who had seen him two hours before, said that when he had noticed it, it was not within at least four or five inches of the shoulder, and yet in two hours it had advanced to the shoulder with a high elevation, so that by passing the finger over from the healthy tissue to the diseased, you could discern the line of demarcation. The man's temperature was about  $105^{\circ}$ , his countenance anxious, his whole appearance that of one who had suffered an extreme shock to the system, and in whom disease was progressing rapidly. I amputated the arm at the middle by the circular method, cutting through tissue absolutely black, cutting

down through the fatty tissue of the arm and down to the muscular parts, the muscles having not as yet become thoroughly involved. I removed the arm, and then applied almost boiling hot water, and then bichloride solution, 1 to 1,000. I pressed out with the bandage as firmly as I could from the shoulder down, all this material, and then filled the conical cavity full of iodoform, put a piece of cotton around, and left it. The man is rapidly improving, and will recover. I know that usually the surgeon who would have done this with any expectation of the recovery of the patient would have been considered very ignorant indeed; but I believe recovery was owing to the powerful antiseptics used, and to the use of the boiling water and the solution of bichloride.

DR. MURDOCH: A very interesting case, I think, has been reported by Dr. Davis, and one that is instructive to us all. The old rule in surgery in regard to amputations in such cases was that in gangrene which arose from a constitutional cause, such as is the case in senile gangrene, or as is the case where gangrene attacks a patient suffering from diabetes, to wait until the line of demarcation was formed. So also in some cases of gangrene resulting from local causes, such as frost-bite, the rule was to wait until the line of demarcation was formed; but in cases of injury, like the one related by Dr. Davis, I think that the rule was never thoroughly observed by the best surgeons, and that even the older surgeons advocated amputation in certain cases, in vigorous patients, while the gangrene was still progressing in cases of injury. But previous to the introduction of the antiseptic method of treatment, no surgeon would have thought of amputating through or so near dead tissue as Dr. Davis did in this case, and if he had done so without such treatment, he would not have been successful; the gangrene would have extended. For that reason this is a very interesting and instructive case. There is another point which is very instructive and useful, suggested to my mind by the report of this case. Dr. Davis tells us that the arm was bandaged very tightly above the wound, but he does not think the bandage had anything to do with the gangrene. Whether it had or not, I wish to call attention to something that should be known and well observed by surgeons. It has been my fortune, since I have been connected with the Western Pennsylvania Hospital and before, to see patients brought to the hospital with tourniquets on limbs pressing entirely too tightly above the wound for the purpose of arresting hemorrhage. I have seen several cases brought, where gangrene has resulted from the tightness of the bandage above the wound, applied in one case by a doctor, and in several other cases by those not professionals. I know of one case where a man was brought not very far from here, with a not

very severe wound of the leg. A tourniquet had been on the thigh twenty-four hours, and the limb was in a state of gangrene. This was owing entirely to the tightness of the bandage. I have known several such instances, and also instances in which patients have been brought with very slight wounds, there being only wounds of veins, the tight bandage distending the veins. Now, these frequent accidents justify the belief that if there was none of this tight bandaging, there would be more lives saved than lost as a result.

I think more people are injured by the tourniquet applied to wounds than are benefited. This is my experience in these cases. This practice arises from faulty ideas in the minds of the people, which have emanated from the profession. The profession is accountable for the education which the people have, and the reason these cases are frequent is owing to the fact that the public cannot be instructed how to apply a bandage in case of a wound. We know there are books circulated in the community, and all over the world, that instruct the laity to apply, in wound of an artery, a tourniquet or tight bandage above the wound; in wound of a vein, below the wound. These are the universal instructions to the people. Our policemen are so taught. The same is true of locomotive engineers. In wound of an artery, they will put the bandage above; in wound of a vein, they put the bandage below. They are instructed, further, that in wound of an artery the blood will be bright red, and will issue with a spurt and a whiz; that in wound of a vein the blood is black, and will issue continuously. These instructions are sufficient, perhaps, for a man who has gone through a medical college, the man who has seen a wound. Yet he may have seen very many wounds and still be mistaken in this particular. It requires a great deal of experience to enable one to distinguish between the blood from an artery and from a vein. The attempts to instruct men who are not professionals, who are not accustomed to observing severe injuries, result in more harm than good. The non-professional man, when he sees a wound, says to himself: "Now this may be a wound of an artery or a wound of a vein: I don't know exactly, but I will be on the safe side, I will put on the bandage above." Thus it happens that in every wound, severe or small, of vein or artery, the bandage is put on above the wound, and usually as tightly as it can be drawn. In nine cases out of ten these instructions result in injury. At a watering place not far from this city, a little boy fell against a mirror and cut the veins of his wrist horizontally across. There were few gentlemen at the house, and the ladies were frightened; but there were some very intelligent gentlemen present. A tight bandage was put on above the elbow. The wound continued to bleed. Then they held the arm high up. It still con-

tinued to bleed. The boy bled for two hours, until the arrival of a physician. The physician stopped the hemorrhage. He did it by removing the bandage. From like repeated experiences, I am of the opinion that the instruction being given to non-professionals results in more harm than help. If it be wise to attempt any teaching in the control of hemorrhage, I would advise these rules: If the hemorrhage be copious, and a bleeding point is seen in any wound, let it be covered by the finger point, and let this pressure continue until the arrival of a physician; if the bleeding be not copious put a bandage, not above or below, but *upon* the wound.

DR. BATTEN: Dr. Davis was fortunate in the ending of his case. I had some experience with hospital gangrene in '62 and '63. Many of the wounded of that time were afflicted with gangrene. If the leg was wounded, the gangrene would extend around the leg and expose the vessels before amputation was resorted to; but the gangrene was not arrested by the operation. It extended. And in many cases re-amputation above the knee became necessary. I believe the knowledge that is being sown among the laity regarding the care of the wounded is more harmful than beneficial. Persons not accustomed to handling wounds are timid; if they do anything, it is as likely to be wrong as right.

DR. BUCHANAN: I think Dr. Davis is to be congratulated on the success of his operation, but I think he is giving rather more credit to the antiseptics than is justified by the case. No one, I think, can be a firmer believer in antiseptic treatment than myself, but I believe that Dr. Davis rather overrated the influence of his antiseptic agents in this case. Either the flaps in this amputation were dead or they were alive. The outcome of the case shows the flaps were alive; but the antiseptic agents are not to be credited as preserving them. Either the lymph channels were swarming with bacteria or they were not. If they had been so swarming, I do not think any application of antiseptic agents would have destroyed the microorganisms they contained. I believe the man was suffering from the presence of the decomposing member, and that when Dr. Davis removed that, he removed the cause of the disease, and that probably if he had not used any antiseptic agent the irritation would have subsided as quickly.

I do not wish to be understood as saying that the outcome of the case would have been as favorable; in all probability, he would have had suppuration and trouble, but from the description of the case, I believe that the majority of men so affected would recover without antiseptic agents—not so nicely, indeed, but they would recover. I don't believe in giving more credit to the antiseptics than they deserve.

DR. DUFF: It is of importance, very frequently

that the non-professional who may witness an accident involving dangerous hemorrhage shall possess the knowledge and skill to arrest this until the arrival of the surgeon. I have twice hastened to such cases to find the patients dead of hemorrhage. It is to be regretted that the instructions now being given to engineers, firemen and the police are lacking in practicability; still they are, perhaps, better than no instructions.

DR. MURDOCH: Despite what has been said, I still adhere to the opinion that instructions in medicine and surgery imparted to the laity cannot result in good. You say, "We don't want these men to know very much; all we desire is that they may know what to do in emergencies. We want them to arrest hemorrhages, to resuscitate the drowned and a few little things of that kind." The man who is always able to arrest hemorrhage is a great surgeon.

How many of us could arrest hemorrhage as was done by Dr. Smith, of New Orleans? He tied the brachial for aneurism, then the axillary, then the innominate. That was the "little thing" required to stop the hemorrhage. That was all he did. A man who could arrest hemorrhage under all circumstances would be the greatest surgeon on the globe. The man who is able to give proper "first aid" to the wounded must be a good surgeon. For this reason it is that the attempts to teach the ignorant to do this will frequently result in disaster.

DR. GREEN: I congratulate Dr. Davis on the result of his case. The discussion that followed it seems quite complete, yet there is a desire on the part of the public, when an individual is wounded, to arrest hemorrhage whether there is any hemorrhage or not. If an individual, working in any of our mills, is wounded, the first thing done by the bystanders is, to "stop the bleeding." If the public could be taught to wait until the wounded individual would bleed, and then interfere, I think it would be a good step in the instruction of the laity. I have sent a number of patients to the hospital from the mills in the neighborhood in which I practice, and very frequently I have sent them without any application whatever. I remember two instances, in each of which an arm was torn off at the shoulder. Dr. C. B. King will remember one case and Dr. Murdoch the other. I think he amputated the arm. The soft parts were torn off almost completely at the shoulder, and the bone two or three inches below, yet there was no bleeding.

DR. DAVIS: In reply to Dr. Buchanan, I believe that until very recently, there is no authority for cutting through gangrenous parts. I do not know whether there were any bugs in the lymphatic system of this patient's arm or not. I am not much on bugs. I believe it was the hot water and the bichloride. The tissues were full of gas and the cutting pressed the bubbles of

gas out, but whether there were any bugs in them or not, I don't know.

DR. BATTEN: I have a case which illustrates the result of instructions to the laity. We all know that the laity know the use of bromide of potash, chlorate of potash, quinine, etc., about as well as physicians do, and are constantly going to the drug store for these drugs. If the patient has sore throat, the physician says: "Well, take a little chlorate of potash." If the trouble is want of appetite, they say to the patient that they will give him a little quinine, or a little bromide of potash if he has the headache. The consequence is that the laity, when they have the least thing the matter with them, take to the drug store and procure those different drugs. I believe it results in harm. The case which I wish to relate is one in which a barber prescribed. He succeeded in salivating, but not in benefiting, a patient with syphilis.

DR. J. J. BUCHANAN read the following paper on

#### UNUSUAL RESULT OF LONG-STANDING TARSAI CRIES.

The patient whose case I am about to report, a girl *æ*t. 16, came under my care in June last, with the following history: Family record free from tubercular or specific disease, health perfect till close of third year, when a bleb appeared over the outer aspect of the *os calcis*, which subsequently broke down and formed the extremity of a sinus leading to the bone. This sinus remained open for years, occasionally discharging detritus of carious bone, till eventually the posterior portion of the calcaneum was entirely gone. Sinuses then formed in other parts of the ankle and lower part of the leg. During these thirteen years her health has been precarious, severe illnesses alternating with periods of comparative health. Some weight could be placed upon the toes till about five years ago, since which time the limb has been perfectly helpless and its great weight has made it much of a burden. For that length of time she has been obliged to walk on crutches, and the weight of the limb permitted almost no walking outside the house. She has long been unable to move any of the toes or her ankle in the slightest degree.

When I first saw her, her nutrition was fair, pulse 90 to 100 and temperature normal. The limb from the knee down was enormously enlarged, and, at the calf, was thicker than at any part of the thigh. It had the shape precisely of a limb the subject of elephantiasis; the skin, however, was comparatively normal, a little thickened and glazed about the ankle. A number of sinuses opened about the ankle and lower part of the leg, all of which apparently led to the astragalus. The condition of the foot precluded the idea of any conservative operation, the only question being whether to amputate through the



leg or at the knee. I amputated about the middle of the leg by antero-posterior flaps, using antiseptic precautions. The muscular tissue at the point of section had entirely disappeared and had been replaced by connective tissue. The flaps cut like salt pork, very heavy, inelastic, and were made up entirely of connective tissue, with gaping vessels traversing it, and imbedded in it an occasional tendon. A single sinus in one of the flaps required scraping with the sharp spoon. The bones gave evidence of chronic inflammation. The larger vessels were secured by passing under them a needle armed with catgut, and tying them *en masse*.

Subsequent dissection of the amputated part showed its soft tissues to be in exactly the same condition as existed above; careful search failed to reveal a remnant of muscular fibre in the foot. There was complete disorganization of the ankle-joint, absence of the posterior portion of the calcaneum and beginning disease of the tibia.

The stump healed by primary union, and the patient was out of bed on the ninth day. Five months later her attending physician, Dr. Cyrus McConnell, wrote me that the remaining part of the leg had diminished to about the size of its mate, and that her restoration to health had been complete.

As to the pathological condition existing here, I suppose that during these thirteen years of inflammation and caries of the tarsus, there had been a constantly increased supply of blood sent to the foot, and that this had caused the enormous overgrowth of the connective tissue of the limb. Dr. John H. Packard, to whom I related this case, suggested that probably there was also an involvement of the lymph channels as in the so-called elephantiasis. I report this case for the reason that I have no knowledge of any similar one, and the literature at my command does not describe this pathological condition as resulting from carious disease.

DR. DAVIS: I rise to speak of the fact only that I think in my experience I have seen a case very similar to Dr. Buchanan's. It was a case of caries of tibia of long standing, in a young woman. I cut down on it and scraped and worked around it in the manner of bone scrapers, without hope of doing her much good. The tissues struck me as being in just the condition that the doctor describes. The part did not heal kindly, and after some weeks the limb was amputated above the knee by my colleague, Dr. Dickson. The description of the tissue makes the two cases very similar.

DR. ALLEN then made some remarks upon

#### SYMPATHETIC OPHTHALMIA.

The fact that there is nothing in the whole domain of medicine more important than the saving of the remaining eye to the man who has already

lost one, will justify the time I shall consume upon the subject. I will not go into a lengthy discussion of the cause of this affection: some men believe that the germ of suppuration travels from the affected eye through the optic nerve to the sound one: some explain it through the sympathy of the ciliary nerves: whatever the cause the point I wish to emphasize is, the early removal of the injured ball. "Save the eyeball" is a too frequent cry in cases of injury even after the sight is destroyed. It is a cry that is ominous to the patient. Whether there is a foreign body in the ball or not (a matter which cannot always be determined), whenever the sight has been destroyed and there is any irritation in the sound eye, early and complete enucleation is the best treatment. The injuries that in my experience are most frequently followed by sympathetic ophthalmia are those through the junction of the cornea and sclerotica, involving the ciliary body. When such an injury exists a sharp watch should be kept for the advent of sympathetic inflammation, and upon its appearance immediate removal of the wounded ball is indicated.

#### Clinical Society of Maryland.

*Stated Meeting, December 21, 1888.*

THE PRESIDENT, GEORGE H. ROHÉ, M.D., IN THE CHAIR.

DR. JOHN W. CHAMBERS read a paper on *Cholecystotomy, with Relation of a Case.*

DR. L. McLANE TIFFANY reported some cases of

CRANIAL INJURY INVOLVING REMOVAL OF BONE.

The report embraced ten cases, since 1883. The injuries were the results of different causes and in all more or less bone was removed. Recovery took place from the operation in the ten cases. In one instance the patient's mind became seriously impaired and it was found necessary to remove him to a hospital for the treatment of the insane. The operations were all done antiseptically. In one case where death took place some time after the operation, it was thought to have been caused from a fracture at the base of the skull which was present in addition to the injury on the surface. Blood had oozed from his ears prior to his entrance into the hospital. The patient partially recovered consciousness, but remained out of his mind till death, which took place on the twenty-seventh day. In another case death occurred some time after operation, and was the result of an abscess which formed after the patient had been injured by a pistol bullet which entered the brain and was not recovered. The autopsy showed the presence of the abscess in the right hemisphere, no portion of which was within 1½ inch

of the convexity of the brain. Some fragments of lead were found in the abscess, and their presence most probably caused it.

DR. J. EDWIN MICHAEL said that in connection with this very interesting series of cases reported by Dr. Tiffany, he desired to speak of a number of similar ones that have come under his treatment during the time embraced in Dr. Tiffany's report. The cases came to him in groups; two in the early part of 1883 and four between January and July of the present year.

*Case 1.*—Male, æt. 33, who met with railroad accident, crushing his left leg and causing injury to his head on the left side. He was brought into the hospital and the leg was amputated. An examination of the head showed a fracture of it at about the upper segment of the occipital bone. Operation was decided on and the preliminary steps of preparing the wound were carried out. The trephine was then used and a number of fragments of bone were removed. There was some loss of brain substance; the dura was slightly ruptured, some hemorrhage occurred from a small artery, which was ligated. The wound was then dressed and no bad symptoms followed.

*Case 2.*—Male, a sailor by occupation. He had received a compound fracture of the middle part of the parietal bone on the right side. He was not trephined for about forty-eight hours afterwards; hebetude was present and a rise of temperature had taken place. After going through with the usual preparations, he trephined at the margin of the fracture and removed the fragments away. Dura was not torn. The wound was dressed in the usual way and no head symptoms followed the operation.

*Case 1. (Second Series.)*—Male, German, æt. 40. He came in contact with a revolving grindstone, which struck him on the left temple, it made a ragged wound and he was taken to a drug store where the proprietor applied Monsel's solution to it. An examination of the parts revealed a fracture of the skull; the trephine was used in consequence; it was placed at the margin of the wound and a button of bone removed. The dura was not wounded. The margin was then cleansed and trimmed and the wound adjusted in the usual way. Some evidence of inflammation was about the wound for awhile, but soon subsided and no other symptoms appeared.

*Case 2.*—Male, æt. 45, turner by trade, while working at his lathe operating on a block of wood it struck him on the head. He was brought to the hospital where he was anæsthetized and examined. A fracture of the skull was found and the bones were taken away. The fragments showed both the external and internal tables, including the frontal sinus. When the removal of the fragments of bone was complete a probe passed into the nose; all of the cribriform bones and the crista galli of the ethmoid were included in the

bones removed. Considerable hemorrhage occurred, most probably from the longitudinal sinus. A current of dark blood spouted from the hole, but it was controlled by haggling the tissues. The wound was packed with iodoform. Pressure was then applied and no further trouble occurred. The dressing remained on for ten days when it was repowdered and it turned out to be an aseptic case.

*Case 3.*—Boy, æt. 10, while stealing a ride on a street car, fell and a loaded cart passed over his head. He was taken to a drug store and first seen by Dr. Biedler, after which he was sent to the hospital. At least a tablespoonful of brain substance was lost. Examination of the head showed an injury to the parietal bone on the right side near the lamboid suture. He anæsthetized the patient and examined more thoroughly. At least half an ounce of brain substance was seen. A ragged wound was observed and the bones found depressed. The trephine was placed at the most convenient point and a number of pieces of bone were removed; the dura mater was largely torn. The wound was dressed as usual, a drainage tube was used which ran the whole length of the wound. His object in doing this was to bring about drainage and at the same time prevent hernia of the brain. The case went on favorably and at the end of three weeks the dressing was removed and the patient left the hospital.

*Case 4.*—Boy was knocked down by a mule striking him on the forehead over the frontal region. He was called to see him by Dr. Norris. The patient at this time was unconscious; the wound was very ragged. He sent the case to the hospital, where the usual preparations before operating were made, the wound was then enlarged and the bone fragments were removed; dura was not torn. A fissure extended over the orbit and another passed backward over the head; this led him to suspect severe injury. There had been some convulsive movements of the left leg and foot, but they ceased after the removal of the bones and dressing the wound. These cases, with those reported by Dr. Tiffany, make some fourteen in all that have been treated in a similar way.

DR. RANDOLPH WINSLOW said he had recently seen in consultation a case of fracture of the skull which illustrated two facts, first, that a very small injury may result fatally when treated badly; second, that it is sometimes difficult to make a correct diagnosis even when the symptoms point almost pathognomonically to a certain lesion.

*Case.*—A man, æt. 37, was struck upon the head by a brick falling from a height of 18 or 20 feet. He did not become unconscious at once, but after walking a short distance lost consciousness, which, however, he regained whilst being conveyed to his home in the patrol wagon. A

wound was made in the scalp over the upper portion of the fissure of Rolando. A doctor who was called said he had a fracture of the external table of the skull, and put a suture in the wound. Falling into the hands of another practitioner, the wound was not opened and the patient did well for five days, when he complained of pain in the head, and a numbness of the right arm, the wound being on the left side. Soon he became hemiplegic on the right side with left facial paralysis and aphasia, and he seemed to be unconscious. On December 13, I saw him for the first time and found the symptoms as above, the pupils contracted, but responsive to light; involuntary evacuations; temperature 103°; pulse 68. I was certain that I had to deal with an abscess following a depressed fracture, and so opened the wound, which had healed, and found a very small depressed fracture with the fragments so tightly wedged together that they could not be raised until the trephine had been applied. The dura mater was pressed upon but not penetrated and there was no abscess or clot at the seat of fracture. The dura and brain bulged into the opening. The membranes were punctured and the brain explored without finding pus. The symptoms seemed to ameliorate slightly for a day or two, but spasms of the face and thumb and fore finger, with paralysis of motion and sensation, pointed to trouble about the lower and middle of the motor area so strongly, that I again trephined him, near the lower portion of the fissure of Rolando, and a slight discharge of pus occurred but no abscess was found. At the autopsy no abscess could be found, but a left sided prevalent meningitis, and thickening of the meninges, probably of the ascending parietal convolution. Dr. Winslow was also of the opinion that the skull should be explored in all cases in which there is a probability that a fracture has occurred, though no wound of the skull be present.

DR. ROBT. W. JOHNSON said that he had under his charge three cases of fracture of the skull, in his service at Sparrows Point; one of these died and two recovered after the bones were raised. The third case was of special interest to him. The patient was struck on the head in the frontal region by a block of wood. The eye was very black from it. After the injury he walked some distance and was able to give his name. When he saw him he was unconscious and after making an examination he diagnosticated fracture of the bones of the skull, but did not locate the clot; shortly after this paralysis began in the left leg and arm and he decided to trephine; a button of bone was removed and he found a clot about the motor tract which was of some duration. The hemorrhage was controlled with warm water and packing the wound. He mentioned this case, he said, because the subject was under discussion and he simply wanted to refer to it.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*The Influence of Carlsbad Water in Uric Acid Excretion—Auto-Infection from Gastro-Intestinal Fermentation—The Section in Practice of Medicine of the New York Academy Reelects its Chairman.*

At the last meeting of the Section in Practice of Medicine of New York Academy, Dr. Schuman LeClercq, of Carlsbad, read a paper on the *Influence of Carlsbad Water on Uric Acid Excretion*, in which he gave the results of a series of careful experiments on his own person. Dr. F. H. Otis added his personal experience and observation in the treatment of obesity and hepatic derangement. The Chairman, Dr. R. C. M. Page, said that individuals who had too much fat and those who had an excess of uric acid would derive benefit from the treatment; but for those suffering from Bright's disease or pulmonary trouble, or from any grave depression of vitality, it was only attended with evil.

At the same meeting, Dr. Wm. H. Thomson read a paper on *Auto-Infection from Gastro-Intestinal Fermentation*, a subject to which he incidentally referred when taking part in the recent discussion on neurasthenia before this section of the Academy. He first related several cases in which he believed auto-infection to have resulted in the production of serious nervous troubles, and then made these the text, as it were, for some general remarks on the subject. The first was that of a lady, 50 years of age, who was affected with Graves' disease; though the enlargement of the thyroid and the exophthalmia were slight. She had suffered for a considerable time from diarrhoea and excessive nervousness, and she continued to grow steadily worse until she was finally placed upon an exclusive diet of Arabic fermented milk. No medicine was taken except some bismuth and pepsin powders, but, under this treatment she rapidly improved, and at the end of two months was practically well. Returning to a mixed diet, she was again troubled with the diarrhoea, and she then resumed the fermented milk, but after a time it became so distasteful to her that she was obliged to give it up. Dr. Thomson now lost sight of her for a year, and when he saw her again, he found the condition greatly aggravated; the exophthalmia and enlargement of the thyroid having increased very much. This time fermented milk had no effect, and not long afterwards she died very suddenly. It would seem, he said, that in this instance, the milk for a time arrested Graves' disease.

The next case was that of a gentleman of thirty-five, who suffered from dyspepsia and hypochondria; his chief trouble being palpitation of

Does any student of medicine ever study the dissected body in the erect posture? How slow must be the march of improvement, until each and every guilty school is proscribed, and the mutilated and maltreated public protected by the State assuming the power of examination and license! How like these days to those in which Hippocrates found the ignorant physician suffering no punishment but disgrace, which it was truly said galled not him familiar with it!

Very faulty also is the surgical instruction obtained by the internes of many hospitals. Fortunate above their brethren who receive no such appointments, but yet unlucky too, if compelled to serve under careless, hurried, or ignorant chiefs! Unsuccessful surgery of after years is often due to imitation, perhaps unconscious, of the faults of a long-dead hospital superior. It is the unwritten duty of the chief to aid in the perpetuation of good surgery by an example of accurate, painstaking and therefore successful work. If he have not time or ability to thus aid patient and pupil, whose interests are truly one, let him step aside for another. The hospital of to-day has no need of the surgical figure-head, however great his name; no room for the bungler, who sacrifices life and prostitutes the high calling of surgeon by inoculating his patients by means of dirty fingers and soiled linen.

An evil influence is exerted also by the selfish hospital surgeon who never permits his junior to do major operations. An intelligent interne gives his time to the hospital, that he may learn. It is, therefore, the chief's duty to give him an opportunity to operate, under the chief's direct personal supervision, be it understood, when the patient's safety and the hospital's rules and interests do not contravene. In homicide cases, in operations whose expediency has not been fixed by general consent, in procedures requiring the well-trained educated touch, such deputizing is not permissible; but we all know that a resident surgeon can justly undertake amputations and many other operations, if we supply the experienced judgment, and guide the successive steps of the mechanical performance. A little less selfishness, a little more generosity on the part of attending surgeons would increase the world's youthful supply of successful operators.

Much otherwise successful work is vitiated by carelessly selected assistants. An assistant who does not know the danger of anæsthesia had better be relegated to the practice of cheiropedy; and especially so, if in addition he be ignorant of the fact that suppuration in an operation-wound is usually the fault of the surgical handiwork.

It has been said that the lucky are never the lazy or incompetent; the unlucky never the valiant or wise. The successful surgeon is largely so by virtue of his own inherent fibre; and the personal equation is a factor deserving considera-

tion in surgical, as in astronomical problems.

The surgeon to attain success must above all things be a man of executive ability and manual dexterity; but to these he must add that care, in details of operations and after treatment, as will prevent the unexpected from defeating the object of his well-planned and well-executed handiwork. Absence of executive ability is as conspicuous among those holding surgical posts, as it is in those occupying other positions of trust. A merchant, with too large a contract for his feeble executive grasp, is certainly less ludicrous and pitiable than the surgeon, whose constant appeal for suggestions and whose frequent operative vacillations show that he had no well defined procedure in mind when he made his initial incision. Unexpected difficulties, unforeseeable complications may require operative change, and true regard for the patient may demand professional consultation with the by-standers; but this truth does not condone the fault of a scatter-brained operator, who knows neither what he intends to do, what he wants to do, nor what he ought to do. He is worse than the tyro who shuts his eyes and leaps aside at the first arterial spurt, instead of thrusting his finger tip against the offending vessel's mouth.

Manual dexterity, though inherent in some, may be acquired by most of us, if its seeds are nourished early in life. Give the embryo surgeon a kit of tools, a jig-saw and a lathe; or let him work in the sooty forge of the neighboring blacksmith shop, as did Joseph Pancoast, and you will either develop his sleeping manual skill or prove before college days his inaptitude for a surgeon's work. Can you expect any medical school to make a surgeon of a man who cannot tie a dextrous knot, point a lead pencil, or sharpen a jack-knife?

The practice of ophthalmology, otology, laryngology and gynecology, conduce greatly to the manipulative skill of a surgeon. The delicate touching and the Lilliputian instruments required in cataract extraction, for example, well train the hand for a neat carotid ligation, a successful tracheotomy, or an artistic trephining. Besides that it puts the surgeon in possession of instruments better suited to perform such deeds than the clumsy tools of the ordinary operating case. He is not likely then to select a sword-like scalpel for an amputation, more neatly done with a three inch bistoury. In my own surgical work I find my cataract knife a constant companion; and rarely do an operation without the aid of strabismus forceps.

It must be observed too, that in these qualities of executive capacity and manual skill, there is no aristocracy of talent. The surgeon, as the poet, must be born, not made; but he need not be born of chiralurgical parentage, or even in a surgical atmosphere. I have seen the best surgical work done by young men, who have had no

special surgical opportunities in birth, friendship, or education; while the worst may be seen at the hands of others blessed with every facility of instruction, observation and experience.

Let not the experienced operator, whose well-trained hand obeys with seeming recklessness the decisions of his rapid brain, despise, however, the painstaking care of his less dexterous brother. Genius, we are told, is eternal patience, and the fearless accuracy of the skillful is the reward of well-spent hours.

A brilliant operator without caution and care becomes the unsafe surgeon, whose skill leads to excesses which his lack of care makes unwarrantable. "*Chirurgus mente prius et oculis agat quam manu armata.*" I have no respect for the surgeon who cares more for the number and novelty of his operations than for the welfare of his patients. A record-making surgeon is to be avoided. A little caution would diminish the number of hysterectomies of wombs containing living fetuses, and show us fewer incisions of the pregnant uterus for ovarian cysts! So, care in detail will counter-balance much inferior operative work.

Above all, the successful surgeon is a man of action. Experience and knowledge must be there, but they are of little value without action. Inexperience and ignorance are the parents of timidity and recklessness. To avoid these dangers he must have experience and knowledge, which though power, are mere possibilities until used as a source of deeds. The victory of battle is to the leader who does most, not to him who knows most. The true surgeon often takes the offensive, which is for the intrepid alone; but the weak surgeon falters and lets death come because of his offensive hesitancy. The requirements of aggressive surgery demand a form of inherent moral power absent in many individuals, though, perhaps, replaced by gentler and more lovable qualities. Self-reliance must make the aspirant for surgical honors equal to all his opportunities, for it has been well said that self-trust is the first step to success. He also needs the qualities of that hero in romance who had "the energy of silence, of patience, of the profound strategy which lies in unswerving persistence."

A knowledge of the collateral branches of medicine seems more essential to good surgery than does an acquaintance with surgery to successful medicine. A good physician—I mean a specialist in medical practice—may be almost ignorant of the principles of surgery; but success cannot attend the mere mechanical operator, who knows not the signs of a pyothorax, the clinical and microscopical symptoms of a waxy kidney, or the temperature record of a septic fever.

A professional career may be blasted, too, by the work of a jaded and over-worked body. Surgery requires an alert brain, a quick eye, a steady

hand, a clear judgment; all absent when the machine is habitually worked beyond its limit of endurance. The causation of many inexplicable historical and political problems may be found in the bodily health of some actor involved; and so, the bodily functions of the surgeon are responsible for many of his acts and "mis-acts." It may seem an invidious comparison to say that the surgeon suffers more thus, than the physician; but is not the instant responsibility, often thrown upon him, harder to bear than the less sudden emergencies of the physician's life? The demand for immediate action based upon knowledge, uncalled-for during many previous years, is often appalling to the conscientious surgeon. "*Semper paratus*"—to be always ready—means incessant anatomical and surgical toil. No time to consult digest, lexicon or text-book is given to him who practices emergency surgery. The present exigency often demands instant action without needful instruments and without professional advice. In this respect city surgeons are so fortunately situated, that they often lack the inventive reliance of their country brothers. The latter will make a female catheter of a pipe stem, goose quill, or a straw, or vaccinate a baby with a needle point, while the former sits regretting the absence of pocket-case and lancet.

Again, the brilliancy of a possible success may be dimmed by the surgeon's desire to show the prospective patient the exact degree of danger incurred in an impending operation. Indeed it is possible that some of us may be over-zealous in showing the disadvantages and dangers of operation in otherwise hopeless cases. The laity cannot see, under such circumstances, the future horrors of a prolonged life: and how far the present risks are to be assumed should, perhaps, be decided by the surgeon. This is, to my mind, one of the most wearing responsibilities of surgical life. When to urge and how strongly to urge operative procedures are often harassing conundrums. While thoroughly willing to undertake the most desperate operation, the surgeon finds a severe mental strain in the conscientious endeavor not to unduly encourage the assumption of such risks, and at the same time to give all that surgical science makes available for human suffering. The proper decision of this question has a direct influence upon personal and scientific success. Rashness and importunity in advising operations are always to be deprecated. The true surgeon never wants to operate, but is always ready when operation is justifiable. A mere cutter is neither a surgeon nor a humanitarian.

The successful surgeon is he of a discontented spirit; who courts criticism and fears it not; who criticises himself as cruelly as he judges others; who reviews his own deeds with a keen eye, with no tolerance for the bungler because he must say "*homo sum.*" He has opportunity to

see errors in his own work invisible to any looker-on. Let him search these with careful scrutiny, not covering them with self-complacency. It is said that the wound of a friend is sweeter than the kiss of an enemy; hence, one can well afford to hurt his own self-esteem, since success attends such suicidal policy. Open to conviction must he be, not disdaining to learn from his superiors even if they be his rivals or his juniors. The ungenerous rejection of such knowledge and instruction argues self-conscious inferiority, or at least the absence of the security of conscious power. That the sun fears not the rival light of the new-born moon should be remembered both by institutions and individuals.

An important adjuvant to success in operative surgery is rapidity of action without flurry. "Ohne Hast, ohne Rast," the poet-philosopher's dictum well applies to surgery. Nimble brains and fingers are the surgeon's best equipment for operative perfection and success. To occupy five seconds in opening a felon, without anæsthesia, when two seconds is sufficient, is butchery. The witless apprentice knows that you can drive a nail effectively with a quick blow, while many times the power slowly applied is ineffectual. Surgery shows similar illustrations of the advantage of celerity. Want of this surgical alacrity is painfully evident even in those coming to post-graduate schools after years of professional practice. To be sure it is partly inexperience and ignorance, but much of it is mental lethargy. Such men are not fitted for surgeons.

The general standard of surgical excellence is lowered, in my opinion, by the unwarrantably high fees exacted at times by recognized leaders. Such fees compel the public to accept inefficient, though cheaper service, with a corresponding depreciation in the reality of surgical success; and at the same time indicate a failure on the surgeon's part to recognize the humanitarian side of professional life. No just man will charge more than his services are worth, because the patient is rich, any more than he will pay a pecuniary commission for consultation practice brought to his door.

What are the characteristic attributes of the personified Surgery of to-day, which make it in the eyes of the world almost an exact science; certainly thus exceeding its sister, Medicine.

Simplicity, accuracy, and certainty are the tripod upon which has been reared a wonderful structure of successful progress and aggression.

Its simplicity resides in its methods as well as its instruments. Contrast the simple and unvarying dressings, applicable to dissimilar conditions, of modern aseptic surgery with the former multitudinous formulæ, varying with the location of disease and the caprice of the individual surgeon. Then, each surgical condition had its specific application, and each surgeon his opinion

as to the best application for such condition. Now, though there be preferences as to therapeutic means, the number of admissible formulæ is small; and personal deferentialism made for varying conditions almost unknown. The simplicity and uniformity of pharmaceutical preparations for internal medication would be incredible to the chirurgical polypharmacist of the last century. Absence of surgical complication and our accurate knowledge of physiological therapeutics have now reduced the surgeon's needs in this direction to a ludicrous minimum. A few ounces of ether, a few grains of corrosive sublimate or hydronaphthol, a few strands of catgut, plenty of boiling water and a piece of soap, constitute the pharmaceutical essentials of an extensive operation; and many surgeons do perfect work without the mercury or naphthol. This seems, indeed, a travesty of the outfit of Ambroise Paré or Baron Larrey.

Thus also is simplicity apparent in the construction of instrument and apparatus. Mechanical complication may be permitted, is, in fact, necessary to accurate performance, in wood and metal, but it cannot replace manual dexterity in operations upon the changing and ever-varying living body. The attempt to substitute mechanical complexity for surgical skill, in operative methods and surgical appliances, dwarfs the surgeon's mental and manual development, increases the liability to mishap, and defeats his object, the best manipulative service to the diseased or injured patient.

I would not be understood to underrate the importance of properly made instruments or the disadvantage of inefficient ones. A poor workman is said to find fault with his tools. The counterpart is equally true, that a good surgeon never has poor tools. And yet, has any one of you ever had a trephine re-sharpened after successive operations have blunted its virgin teeth? Have you not often accepted from your instrument maker a gnawing forceps without a keen edge? Do you not know that chisels and scissors are proverbially as dull as a Bœotian shepherd? Such negligence, however, is venial; but a gimcrack lithotome or a safe-cutting skull perforator, warranted not to do harm in the clumsiest fingers, is a complicated abomination, deserving the reprobation of every surgeon who knows the location of the bladder and who has been taught to make an incision. A skillful surgeon is known by his deft fingers and few tools. To be equally deprecated is the manufacture of retroflexed, anteverted, doubly-twisted, and otherwise specially moulded splints, guaranteed to overcome muscular displacement that never occurs, or named after men who never recommend them. Such measures to replace the surgeon's brains by specially labeled appliances to suit every condition, is a plagiarism of the homœopathic globule-



case with its numerical antidote to every human ill.

Complexity is allowable only when skill and simplicity fail to accomplish the necessary purpose. Permanent traction with adhesive plaster has succeeded the Desault splint for treating fractures of the femur. Let similar simplicity as successfully reign in all departments! The revolution has more than begun. May it be completed by American surgeons rejecting still other legacies of European combersomeness!

Accuracy is another factor of extreme importance in the evolution of successful surgery. The "rule of thumb" may be allowable in the culinary department of the household, but not in the diet-kitchen of the hospital, nor in the dosage or operative work of the surgeon.

Surgeons are especially inaccurate in their pathological knowledge, and this alone has added many unsuccessful cases to surgical history. Accurate pathological study, accurate and discriminating diagnoses, accurate and perfect operating, done with a hand that never trembles and a heart that never quails, will give us success to rival that already obtained in these marvelous latter days. This admirable state of science, however, cannot be reached, while professors affirm to their classes, that excised portions of nerve are enlarged or inflamed, when they themselves know nothing of its usual appearance except as seen in the shrunken indurated cadaver; while men persist in operating upon what they call "*Empyemia*," or prescribe doses of that non-existent remedy "*Sulphate of Cinchona*." Is it unreasonable in me to decline to submit my body to operation at the hands of a man, who speaks of wounding the *peritonetum*; or who defines breakbone fever as the fever that occurs subsequent to fracture? I believe accuracy to be the daughter of knowledge; and conclude that a slipshod daughter argues little for the quality of her mother. Until more definite diagnoses than pelvic cellulitis or constipation are made, when pyosalpinx or strangulated hernia exist, surgery cannot expect to rival the exactness and precision of the higher mathematics. It is said that surgery is not an exact science. "Alas! too true" replies the average surgeon, and on he goes, with cool complacency, in his well-worn path of indifferent inaccuracy.

I know of no greater need of accuracy than in the compilation of statistics. Many otherwise trustworthy men assure us of their ratio of successes or failure by reference to their unaided memory, than which there can be no more treacherous guide. I recently read an article, in which it was stated that resort had never been made by the author to a certain operation, because a more effectual and better procedure had been adopted by him; and yet, I myself had seen him use the very expedient which he denied, and of which

the recollection had been blotted from his untrustworthy memory. The inaccurate statements of the clinical amphitheatre well enforce the axiom that, if speech makes the ready man, writing is required to make an accurate one.

Accuracy of knowledge, however, avails little, unless seconded by accuracy of performance. Ligation of the brachial plexus is not likely to cure aneurism of the axillary artery, nor division of bands of cellular tissue certain to correct strabismus due to hyperopia; a stone in the bladder, moreover, will certainly elude the grasp of the surgeon who pushes his forceps between bladder and rectum. Similar errors have been committed, gentlemen—not by you, perhaps, but certainly by me. It is unpleasant to admit it, I know, but if conviction of sin be the first step toward salvation, the admission of incompetent surgery is the beginning of surgical success. Because I once treated a thyroid luxation as a fracture of the femoral neck, and again made a hole in the sclerotic when doing a tenotomy of the internal rectus, I ought to be more competent to treat those conditions, than the wise man who never thus blundered.

Accurate operating demands well-made, keen and simple instruments, but even these, as I have previously said, require the guidance of a deft hand. By such a hand I have seen a creditable cataract extraction done with an abscess bistoury and an ear-pick.

The crowning achievement of modern surgery is its certainty of result. The simplicity of its detail, the accuracy of its doctrine and the dexterity of its exponents, have combined to render the prognosis of operative cases almost prophetic. It is not many years since the mortality of amputation of the thigh and that after resection of the knee was appalling, since trephining was dreaded as a mortal operation, abdominal section almost eschewed, and ovarian tumors looked upon as incurable. Need I weary you with speech concerning these operations to-day?

Few of you will dissent from the statement that in wound-surgery certainty of success depends on the thoroughness with which the maxims of asepsis and antisepsis are carried out. Not many years ago this was a mooted question in the meetings of this Academy. To-day it is an unquestioned surgical truth. The advocates of aseptic surgery were at first derided; but truth can afford to wait, and they, believing they had found the truth, waited. It was a repetition of the trust of the old astronomer, who declared he could well wait a hundred years for a reader, since God had waited a thousand years for an observer. It has been, and still is, difficult to convince the septic sceptic of this decade that the dirty finger-nail is more potent in its deadly work than the iron nail of Jezebel, that it has slain more than the dreaded yellow fever and cholera;

and that the aseptic cleanliness of the surgeon is better than the so-called godliness of the Christian scientist. With all reverence I declare that the clean hand is more necessary to the successful surgeon than the pure heart. The fingers of a dentist may be clean enough to put into a lady's mouth, and yet be too unclean to operate upon her body. Let a surgeon cough or sneeze in a patient's face if he please, but he dare not into the opened abdomen. I believe my years are less than those of any other Fellow of this Academy, yet, I am not so young but that I have upon my shoulders the responsibility of death due to my ignorant prejudice or filthiness. The occasional rapid healing of operation wounds was attributed by me to constitutional beneficence of the patient, instead of to accidental cleanliness of the operator. Perhaps it is this consciousness of dereliction which makes me feel so strongly the error of those who reject the relative certainties of aseptic practice. While I am not a disciple of those who make a fad of chemical antiseptics, while I care not whether a man make himself, his patient and his apparatus aseptic by soap, water and heat, or by those agents associated with chemical solutions; I do not assert that he who believes all such precautions unnecessary and who acts in accordance with that belief, is dangerous to the community, and has no right to practice operative surgery. One who shoots his friend with an "unloaded" musket levelled at his head, is considered a fool and exposed to public condemnation. If the septic surgeon who inoculates his patient with fatal disease be similarly treated, the world's misery will be much lessened. The old time abolitionist believed that one on God's side made a majority; surely the surgeon who believes in non-septic operations is on truth's side, which is always God's side. A devotee to the religion of asepticism, of even mediocre skill, will do the world more good service than a septic genius, who to the experience and wisdom of a John Hunter, adds the manual skill of a Robert Liston.

If writers and speakers would cease quarreling about asepsis and antiseptics as words and realize that it is facts, not definitions or theories that demand attention, there would soon be such a combined army of non-septic surgeons that the septic murderer would cease to exist. It is the wrangle as to whether cleanliness without chemicals is better than chemicals alone that retards the wheels of progress. I hear men declare that strict cleanliness is unnecessary, if solutions of chemical antiseptics are employed; I hear others say that they get good results from cleanliness without antiseptics, when it is evident from their actions and work that they know not the meaning of surgical cleanliness, nor the characteristics of aseptic repair. These abortive attempts at non-septic surgery are most damaging witnesses

against the true system, since the sceptical point to this wilful or ignorant carelessness of detail as evidence of the uncertainty of surgical success.

Much has recently been said, in this city, as to the legal responsibility of those who, neglecting to accept the comparative certainty of non-septic surgery, subject their patients to the greater risk of septic complications attendant upon operations done in the old manner. The importance of this topic and the manner in which I have been involved in its discussion are my excuse for dwelling upon it at length.

Justice Tyndall declares that undertaking to practice a profession is the assumption of an obligation which, though implied, has at the same time all the force and validity of a formal contract; and Stephen Smith, who quotes this opinion, says that the maxims of aseptic and antiseptic surgery have been so generally approved and adopted by surgical authorities, that they must now be regarded as established principles of practice. Hence, if a surgeon fail to apply these principles with reasonable care and diligence, he may justly be held responsible for unfavorable results which the aseptic methods of treatment would have prevented. Smith even goes further, and contends that a surgeon would also be responsible for neglect, if he declined to resort to an operation, capable of affording relief, because of its danger under old methods.

The surgeon may, it is true, decline to undertake any case; but having accepted the trust he is responsible for the results of treatment. Prof. S. W. Gross is reported to have said: "As to aseptic surgery, I can only say that if any one has been taught the modern methods and neglects them, and death occurs from erysipelas, pyemia, or septic complications, he cannot be held irresponsible."

Dr. Busey is quoted to have stated his opinion of antiseptics in midwifery as follows: "Inexcusable neglect, and inefficient and careless administration of the well known rules and recognized appliances of obstetric antiseptics must, in view of their admitted value, be regarded as criminal."

My personal view is very much in accord with these sentiments, for I consider the surgeon who does not practice in accordance with the principles of modern non-septic surgery a menace to the health of the community. Though I care not for the size of his doses or the variety of his remedies, which must depend upon individual requirements and professional choice, I can allow no such latitude in the rejection of such generally accepted truths as those of which I now speak.

Amputation of a finger-tip may possibly be permissible with a dirty scalpel and dirty hands, though I question it; but certainly no one should be allowed to amputate an arm or a leg under such conditions of risk. He who, from prejudice

or inexcusable ignorance, performs such an objectionable operation may, or may not, be legally responsible if fatal pyemia occurs, but I am inclined to think that he is. At any rate it would be wise in him not to call upon me as a witness in his defense. These opinions may increase the already heavy responsibility of the surgeon's life; but, on the other hand, the greater certainty of success should insure him larger fees and greater satisfaction.

My own practice is to first endeavor to obtain absolute cleanliness of patient, operator, assistants, instruments and dressings; and then, on account of the difficulty of attaining perfection in this regard, to employ, as a rule, chemical antiseptics as an additional safeguard. There is no question in my mind that cleanliness is the more important element in my success at preventing suppurative accidents. Still, accidental failure in absolute cleanliness or incidental carelessness on the part of myself or assistants is liable to be followed by such disaster that I usually, though not always, prefer the association of cleanliness and antiseptic solutions. Moreover, septic or specific inoculation of the surgeon's own hands is unlikely to occur when they are bathed in germicidal agents.

The genius of successful surgery has led to unexampled and unexpected progress; for aggressive surgery is the outcome of the success that has followed the adoption of aseptic carefulness. Before the aseptic era aggression was often sheer recklessness, and led, therefore, to a reactive conservatism which still holds dangerously captive many intelligent surgeons of the older school. Conservatism is, up to a certain point, a public virtue; but when it becomes a stubborn resistance to the certainties of scientific progress and to the conviction of statistical argument, it is a dangerous mental attribute. The self-styled conservative has been well described as a man who waits for somebody else to tell him what to do and how best to do it. He who will not be convinced by irrefragable proof is as unworthy the name of surgeon as he who accepts every wild unproved hypothesis for an axiomatic truth. I fear there are to-day surgical counterparts of the old Scotch Professor of Chemistry who described Sir Humphrey Davy as "a verra troublesome person."

The continued life of the erroneous teaching of old text-books and old-brained expositors of whatever age perpetuates this same mischievous conservatism. The progress of ophthalmic surgery was much retarded by the retention for years of the old literature relative to diseases of the fundus. After the invention of the ophthalmoscope this literature ought to have been destroyed, as we pull down the log cabin to make room for the city mansion. So it is now in general surgery; the retention in text-books of opinions and statistics, formulated ten or fifteen years ago, retards the progress of the art and confuses the con-

scientious student. Mortality records compiled before the aseptic period are absolutely valueless, and as unworthy of present consideration as the chapters on pelvic cellulitis penned a few years since. Why not let all this musty literature be destroyed; and by learning from the recent work of both old and young, keep in line with the quick step of surgical advance. The elder may, it is true, guide the younger for a time, but it is to the bright and buoyant hope of youth that we owe that aggressive progress which has carried us so far, that we may dare much and hope everything. Has it not been the young who have advanced our surgical knowledge of the heart, brain, spine, pancreas, kidney and abdomen? The old who led in their young days are in turn distanced by youth, even though they be open to conviction and ready to advance. In surgery as in other sciences, "*quod hodie exemplis tuemur, mox inter exempla erit.*"

Active medical associations, accessible museums and convenient reference libraries are efficient aids to successful surgery. Little good arises, however, from the perpetuation of mutual admiration societies of limited and lazy membership, of associations of garrulous and inexact observers, of unclassified museums with unlabeled specimens, or of libraries whose books are buried in hospital wards or shut up in rooms with long-lost keys.

Of all public adjuncts to successful surgery the hospital is preëminent, but in proportion to its power for good is its fateful power for evil. The best surgery in the world is done in hospitals, because the best nursing, the best hygiene, the best surgical talent can there be obtained. It is undoubted, however, that the best place to see the worst surgery in the world is often the hospital. Errors of judgment, silly modes of dressing, unjustifiable operations and ignorant pretense are at times to be found in such institutions.

Truth was spoken by the writer who stated that in hospitals might be seen the most palpable and deplorable errors openly and shamelessly committed. This denunciation should not be hurled against all hospitals and all hospital surgeons; but though a ward's inmates often get far better surgical attendance gratis than many of the rich pay for in their own homes, it is an undoubted fact that much bad surgery can be seen in public institutions. This is due to the fact that an inefficient or reckless surgeon is encouraged to assume responsibilities, under institutional protection, which he would shun, if exposed to the glaring light and searching inspection of private practice. Whenever the appointing power in hospitals is lodged in laymen whose vote is determined solely by the solicitous words of other admiring laymen, there is possibility, at least, of surgical posts falling into the hands of unfit persons—unfitted by education, training, and experience for the assumption of surgical responsibility. It does not follow that the agreeable friend

of a fellow bank director knows the location of the cerebral centres or the most approved after-treatment for amputations. Yet many hospital appointments are made on this basis. If such officials could easily be displaced by a changing administration, harm might soon be averted; but it is notorious that the more incompetent one is, the more firmly does he maintain his grasp upon attained power.

In certain particulars we could improve our hospital service by adopting measures much more common abroad than in America. The rule retiring all surgeons upon their reaching the period of life denominated senile, is a good one. The conservatism and infirmity of advancing years are usually evident to all other men before their gradual advent convinces their possessor of his inadequacy for onerous hospital duty. Affection, and respect for age, however praiseworthy in the abstract, do not justify the ruthless sacrifice of true surgical success. He who is incompetent, from disease, age, vice or ignorance, to attend to the surgical needs of the hospital authorities themselves is not competent to take in hand the lives and limbs of their pensioners. Worthy of all praise are the many institutions in which these views dictate action!

A continuous service, instead of the usual three or six months' service of the conventional American hospital, is perhaps the rule in European institutions; it has been advocated here. I have personally objected to it on the ground that, with the resident staff organized as at present, few surgeons with practice enough to warrant appointment could afford time throughout the entire year to properly attend to hospital work. It would be very different if in each hospital there lived a house surgeon of several years' experience, who could do emergency operations and decide ordinary surgical problems. Then the attending chief surgeon need not drive several miles to see a sprained ankle or abscess of the breast, or be dragged from his bed at night to catheterize a distended bladder.

Indeed, metropolitan growth is such that hospitals often become so distant from residential centres that it is difficult to secure men of prominence and experience to serve them. This difficulty can only be met by attaching a competent house surgeon to such hospitals, or by paying an annual salary to the better equipped attending surgeons for their loss of time. The superintendent, matron, and apothecary are paid, while the physician and surgeon, without whose work no hospital could exist, serve without remuneration. The mutual relation of distance, efficiency and salary will ere long become important problems for hospital trustees.

In spite of my apologetic prologue I have detained you now too long with this rehearsal of trite and familiar truths; but, fortunately, not so

long as it has taken my unworthy pen to formulate them. My words may perhaps simulate an essay on Unsuccessful Surgery. Still, the precepts of successful living are given in the negative imperatives of the Decalogue. May not those of Successful Surgery assume a similar form?

A great English surgeon has recently expressed the opinion that the final limits of surgery have been reached, in the direction of all that is manipulative and mechanical; and that we have attained, in many of our most important operations, the final limit to which surgery can be carried. Need it be said that he is an old man? Surely this is not the conviction of young minds. Have not surgeons recently made artificial pupils in the sclerotic to relieve heretofore irremediable blindness? Do we not know that the latest vivisectional experiment has successfully constructed a new urinary bladder of previously exsected intestine?

The flame of progress must never be extinguished by hopeless inaction; but ever cherished by successive lovers, imitating the fleet Grecian whose quick hand snatched the flickering torch from his weary comrade's feeble grasp.

The successful future of chirurgical art will still progress, and will, as now, depend on accurate anatomy, careful though ludicrous cleanliness, facile fingers and erudite common sense. Gentle, kind and true in the doing, reliant, bold and firm in that done must he be, who is to aid in the advance towards that surgical perfection which it is intended we shall never reach.

## ORIGINAL ARTICLES.

### SUPPURATIVE PERITONITIS; ITS DIAGNOSIS AND MEDICAL TREATMENT, WITH THE LIMITATIONS OF THE LATTER.

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The subject forming the topic of the discussion which I have been invited to open to-night, may be safely said to embody some of the most important as well as some of the most difficult problems in practical medicine now presenting themselves for solution. It will be impracticable, as well as, in my opinion, inexpedient to absolutely limit the discussion to the suppurative form of the disease. For there will be in many cases a transitional period during which the treatment will have to be conducted with reference to a possible suppurative process, which cannot be diagnosed with sufficient precision to justify the radical methods that such a diagnosis would entail. In others, again, certain etiological facts will de-

termine the suppurative character in advance of symptomatic indications. The preliminary consideration of etiological conditions, therefore, seems to me desirable if not necessary to an intelligent comprehension of therapeutic indications.

In considering its etiology we may start with the proposition that there is no such thing as "idiopathic" peritonitis. When we cease the futile attempt to shield our ignorance beneath the gauzy "idiopathic" or "essential" cloak, it will be a "red-letter" day in the history of medical progress. The traditional influence of "cold" may also be set down as a probable myth. It may also be doubted if traumatism alone is an efficient cause. If it were so every case of abdominal section, or puncture of paracentesis should be followed by peritonitis; a proposition too absurd to be considered. If traumatism and cold are ever important it is when taken in conjunction with the essential causes of the disease. Those extensive traumas which are so uniformly followed by peritonitis are generally associated with other conditions which are rendered active by the trauma; yet we must bear in mind the experiments of Pernice, published last year, which seem to show that continuous aseptic irritation may give rise to sero-fibrinous peritonitis. The results following the introduction of microorganisms into the peritoneal cavity seem to depend upon a variety of circumstances. Thus Grawitz has shown that an injection of schizomycetes, or staphylococcus aureus, if contained in an unirritating medium, will not produce peritonitis. The presence of stagnant fluids, denudation of the epithelium, and fecal distension of the bowel, with the consequent disturbance of circulation, are among the determining causes of their productive activity. Of course suppurative peritonitis is quite impossible without the introduction of one of its special microbes.

On the other hand Wegner has shown that ordinary fluids, such as serum, bile, and even urine, are not alone sufficient to cause the disease. Indeed it is being shown that the peritoneum, with all its traditional vulnerability and intolerance of invasion, has under the most favorable conditions, a remarkable capacity for disposing of foreign products. The exact quality of the foreign matter seems to be a subject of much less concern than the quantity; for if the latter be not too large to be encapsulated or absorbed within an hour, or thereabouts, peritonitis will not result.<sup>1</sup> Even pure cultures of the specific germs of suppuration if not too great in amount, or mixed with irritating material, are disposed of without peritonitis.<sup>2</sup> Cholera bacilli and even fecal matter may be disposed of in this manner.<sup>3</sup>

For all practical purposes peritonitis may be considered as caused by microorganisms rendered

operative by local disturbances, such as blood stasis, stagnant culture media in the peritoneal cavity, or traumatism however slight—*e. g.*, the puncture of a needle. While exceptions are possible they are too rare to be of consequence, and in the present discussion are entirely devoid of interest. It is, furthermore, in the vast majority of cases, consecutive to infectious disease of some other tissue or organ, generally contiguous but possibly remote.

The differential diagnosis of suppurative peritonitis is in many instances a problem the difficulty of which is only exceeded by its supreme importance. To determine the presence or absence of peritonitis is ordinarily not a difficult matter. Yet even here in exceptional cases nearly every symptom may fail us. Take the symptom pain which is so prominent in most cases. In certain cases of the gravest character, and especially where suppuration is present, pain may be entirely absent.<sup>4</sup> Temperature is notoriously inconstant, seldom greatly elevated, while even in grave cases it may be normal. Evidently upon these two symptoms little reliance can be placed. Constipation is probably more constant and is said by Alonzo Clark to be absolute in uncomplicated cases. This is probably true in general peritonitis after the first 24 or 48 hours, when paralysis of the bowel supervenes. Tympanites is usually a pretty constant factor, due to the same cause as the constipation, and fermentation of intestinal contents. Liquid effusion may also be recognized by percussion in the dependent parts in a certain proportion of cases.

Now, considering this complexity of symptoms, in a case primarily non-suppurative, upon what can we rely to indicate the transition to, or the supervention of the suppurative process? Or, given a case of peritonitis, how shall we determine whether it is one or the other? The symptoms which contra-distinguish suppurative from non-suppurative peritonitis are neither many nor very reliable. They are in general the symptoms that stamp an extensive inflammation elsewhere as suppurative or non-suppurative. In the pleural sac we know that the aspirating needle is the only method of determining the question with any degree of certainty, and sometimes even of probability. Many cases of peritoneal effusion will present themselves which can be decided in no simpler way. Unfortunately, however, the method is not so generally available as in the pleural sac. Kronlein says<sup>5</sup> that when the exudation lies behind the mesentery or intestine that aspiration is admissible. But the natural tendency is for it to assume precisely this relation, with the patient in the dorsal decubitus, which is almost invariable in this disease.

So far as symptoms are concerned the absence

<sup>1</sup> Grawitz Annals of Surgery, v. 5, p. 121.

<sup>2</sup> Ibid. <sup>3</sup> Ibid.

<sup>4</sup> Loomis, Goodhart.

<sup>5</sup> Annals of Surg., June, 1887, p. 529.

of pain has been mentioned as more likely to occur in the suppurative form of the disease. Loomis says<sup>6</sup> that typhoid symptoms are present from the onset of suppuration; that delirium is the rule; and that rigors are common. But the concurrence of opinion is that the diagnosis is not so simple as these statements would lead one to think. Typhoid symptoms, with delirium, present themselves in non-suppurative cases, while rigors, which would be of great value if uniformly present in the suppurative form, are frequently absent. Where this combination of symptoms is present, of course suppurative peritonitis can be predicated and safely announced. The occurrence of irregular chills alone should be regarded as strong presumptive evidence that suppuration has occurred.

In another pretty large class of cases of peritonitis, resulting from perforation of some of the hollow viscera of the abdomen, the differential diagnosis from simple adhesive peritonitis becomes, as a rule, more easy. But it is the symptoms of the perforation, rather than of the peritonitis, that aids in the diagnosis. The knowledge of the pre-existence of lesions of abdominal or adjacent organs which are prone to this accident materially aids the diagnosis. Under such circumstances the occurrence of acute localized abdominal pain, with a frequent quick small pulse, anxious face, and contraction of the abdominal muscles, ought to suggest a condition which, if it do not prove fatal from shock, will be speedily followed by suppurative peritonitis. The difficulties, however, are frequently very great, and even where the symptoms are very pronounced it may be impossible to distinguish perforation from obstruction. Thus, in seven cases operated upon by Truc, LeFort, Kronlein, Polaillon, and Miculicz, with a diagnosis of obstruction, in no less than five was the condition found to be perforation instead.<sup>7</sup> Fortunately the first steps of treatment are the same for each.

Suppurative peritonitis must be regarded as an exceedingly fatal disease. Kronlein says that it is difficult to say whether the diffuse variety is ever recovered from or not, as the diagnosis lacks confirmation in the reported cases. There is anatomical proof found in the dead-room that intestinal perforation is sometimes recovered from, although it may be doubted if there was fecal extravasation in those cases. Even if recovery is possible it is so confessedly rare that death may be regarded as the rule, from which there have heretofore been very few exceptions.

The treatment of suppurative peritonitis has undergone a revolution. When once fully recognized it passes from the domain of medicine to that of surgery. The time-honored surgical dictum that "wherever pus is found it should be

evacuated," no longer finds an exception here. Whether it is acute or chronic, general or local, puerperal or non-puerperal, consecutive to surgical operations or accidental trauma, it is still, if the patient has vitality to endure the ordeal, a case demanding surgical procedure.

During the inceptive and developmental stage of most cases that finally become or, perhaps, rather, are finally recognized as suppurative, medical treatment is alone to be considered; and upon its judiciousness may often depend the necessity of a surgical operation.

The use of laxatives, and especially salines, has been urged upon the profession by Tait, Wylie, and others. The suggestion originated with Tait, not as a treatment of peritonitis at all, but within a few hours after an operation to prevent rather than cure the disease.<sup>8</sup> Dr. Wylie first uses enemata to overcome the tympanites and vomiting, and if these fail, a quick purgative. Others advise the production of free watery discharges by the concentrated solutions of salines, thus using the bowels as an emunctory to drain off the serous fluid from the peritoneal sac. (Kelly.) Considering the extremely prejudicial effect that large fecal accumulation would have upon inflammation of the serous covering just outside of it—possibly converting a sero-fibrinous into a purulent one, by producing blood-stasis, and thus favoring the migration of microorganisms through the intestinal wall—an efficient laxative at the onset would seem to be entirely rational in a large proportion of cases.

But when we are offered the laxative as a substitute for the opium treatment, which itself produced another revolution in the treatment and prognosis of peritonitis half a century ago, we must certainly pause and survey the evidence. The first thing that impresses one is, that the advocates of this method have turned a back-somerset and landed in the middle of the second quarter of the century; all of which may be proper enough, for valuable facts are often forgotten in one age to be rediscovered in the next. "Cremor tartar" and jalap was the treatment recommended in 1830 by Eberly, whose teachings were dominant at that time. Purgatives were used on all occasions, throughout the disease. It was fondly hoped, and by many believed, that if the intractable constipation should be overcome the disease would be cured.

About this time Professor Alonzo Clark earned the gratitude of mankind and a niche in the temple of fame by discovering and developing the opium treatment, which was at once recognized by the leading men of that day as a revolution in the therapeutics of peritonitis, robbing it not only of its pain, but by common consent of a large share of its fatality. These are matters of history. Are salines so much more potent now than when

<sup>6</sup> Page 326.

<sup>7</sup> Epstein, New York Medical Record, Jan., 1886, p. 127.

<sup>8</sup> Annals of Surg., Jan., 1887, p. 27.

<sup>9</sup> Dis. of Ovaries page 308.



given by Eberly? Even after the introduction and full sway of the opium treatment purgatives were still resorted to by Meigs and others for the purpose of relieving the tympanites, and no longer than a dozen years ago Bauer found it necessary to announce, in a systematic treatise,<sup>10</sup> that they had finally become useless for meteorism and constipation and completely given up. In the reaction against the purgative treatment, it is quite possible that the other extreme was reached, and that it deserves more recognition than it has received; but when we are asked, as we are by a few, to adopt it and condemn the opium treatment, all in one breath, I insist that the burden of proof rests with those who ask it, and that sufficient evidence has not yet been presented. Dr. Wylie asserts in one sentence that the opium treatment is harmful, and in the next that he gives sufficient opiates to keep the respirations down to 16, and in some cases to 12.<sup>11</sup> When we remember that Alonzo Clark only advises holding the respirations down to 12, it will be perceived that Dr. Wylie comes astonishingly near carrying out the opium treatment which he condemns. Dr. Bantock, whose opinion is certainly entitled to great weight, has no faith in any benefit to be derived from salines in peritonitis.<sup>12</sup> Perhaps, as Dr. Wylie suggests, many of the cases which have been placed in this category are not cases of peritonitis at all. In such cases laxatives would not only be admissible, but ought to produce the most happy results by clearing out the *prima viæ* of feculent or septic matter, or possibly both. Whenever surgical interference becomes necessary, as it will if suppuration occurs or, having occurred, is recognized, the general principles governing the medical treatment will not differ from those which were proper before. There is one class of cases in which laxatives are peculiarly dangerous. In cases of ulceration of hollow abdominal viscera peritonitis may result before perforation takes place. Habershon reports five cases, for instance, in which the peritonitis was the result of incomplete typhoid ulceration, and such cases are probably not exceedingly rare.<sup>13</sup> Adhesion is at once its cure, and the safeguard against perforation. To administer a laxative, and produce active peristalsis, which would be very liable to break up the newly formed adhesions and perhaps at once produce perforation, needs only to be mentioned to be condemned.

Tympanites demands especial attention, as it may, in extreme cases, alone prove fatal. Clearing out the bowels at the onset of the disease will modify one of its causes. The principal one, however, paralysis of the bowels, remains and is constant. Turpentine or assafoetida enemata may sometimes be of service. The rectal tube may

also be tried, but its occlusion by fecal matter, and other difficulties, will probably render it futile. If these simpler methods fail, the quasi-surgical procedure of puncturing the bowel with a fine trocar deserves attention.

Puncture of the bowel was probably first practiced by DelaFont, of Geneva, in 1697, and since then by many observers, among whom are Boerhaave, Mothe (1811), Zang (1818), Roche (1835), Teale (1845), Hicks (1869), Allbutt (1869), Risdon Bennett (1871), and many others.<sup>14</sup> In many cases it has undoubtedly saved life, but is not entirely devoid of danger, as fecal extravasation or considerable hæmorrhage may possibly follow. If the point of the trocar is sufficiently fine and sharp, the tissue of the gut is separated rather than cut, and closes up after the withdrawal of the instrument.<sup>15</sup> It is probably needless to remark that it should only be done under the strictest antiseptic precautions. If it fails or is not deemed advisable, laparotomy is the only resort, and should be advised whether the case is suppurative or not.

Peritonitis complicating the puerperal state is fortunately becoming more rare, and is probably entirely preventable. It is so formidable, and its causal conditions so distinctive, that it is entitled to separate consideration. The first thing which should be done is thorough irrigation of both the vaginal and uterine tracts with a mild disinfectant solution. Since so many deaths have resulted from irrigation with mercuric chloride, I have entirely abandoned its use in these cases, and wish to enter a solemn protest against its further employment. A 1 per cent. solution of carbolic acid has very little toxic properties, while a boracic acid solution is probably entirely free from this danger. Whether the germs in the genital tract are destroyed or not the irrigation washes away the septic fluids with the larger proportion of the microorganisms, while those which remain are inhibited by the mild disinfectant used. At any rate, however desirable it may be, complete destruction of the germs, especially if spore-producing, is impossible with any solution that is not destructive, or at least very harmful, to the tissue. This treatment, conjoined with the opium *régime* and a preliminary evacuation of the bowels, if they have not already been well cleared out, can be followed for about twenty-four hours,<sup>16</sup> when, if the symptoms of peritonitis have not subsided, laparotomy should be considered. Tympanites and effusion constitute the main indications for operation. Here it must be borne in mind that it is not every case of puerperal septicæmia that is peritonitis; and this not even when associated with tympanites. It is well known that extreme tympanites occurs in the puerperal state independ-

<sup>10</sup> Ziemssen, v. 5, p. 260.

<sup>11</sup> N. Y. Record, March 19, 1887, p. 319.

<sup>12</sup> Journ. Am. Med. Assoc., December 17, 1887, p. 792.

<sup>13</sup> Pepper, v. 2, p. 1,139.

<sup>14</sup> London Lancet, July 10, 1887.

<sup>15</sup> Jobert, quoted by Ogilvie, Lancet, Ibid.

<sup>16</sup> Bouilly, Annals of Surgery, v. 5, p. 27.

ent of peritoneal involvement, or infection from the genital tract. I have myself seen several such cases, and remember one in which the distension was enormous and apparently serious for several hours after confinement. Its rapid and complete disappearance in a few hours without other symptoms proved that it was not associated with either peritonitis or general infection.

The point that I wish to make is, that unless operation is undertaken for the mechanical relief of distension, which, as above stated, may be required, the actual existence of peritonitis should be carefully determined before considering operative interference. The degree of general systemic reaction will form a very valuable guide. But here again we must bear in mind that suppurative peritonitis may run a fatal course without the slightest fever.<sup>17</sup> The difficulties in diagnosis are manifestly great, and each case must be carefully studied by itself.

Nothing has been said concerning the therapeutic indications determined by the patient's general condition, because they are not in any way peculiar. The vital forces should be sustained by concentrated nourishment, and, when necessary, by free stimulation. In short, the general management of the case should be dictated by those principles which ordinarily guide us in the asthenic type of diseases to which peritonitis belongs.

In attempting to indicate the limits of unaided medical treatment it is not, of course, supposed that when surgery steps in, medicine, as distinguished from surgery, steps out. It should not be forgotten that medical treatment becomes all the more important, because rendered more effective by its surgical auxiliary.

## CLINICAL LECTURE

### ON SCIATICA, NEURASTHENIA AND HYSTERIA.

BY PROF. J. M. CHARCOT,

PROFESSOR IN THE FACULTE DE MÉDECINE DE PARIS.

*Translated from La Semaine Médicale for THE JOURNAL, by A. CHURCH, M.D., of Chicago.*

The patient I present to you does not bear in his appearance the marks of active intelligence. He is an individual that never learned to read in his youth; he did his military service in a regiment of dragoons, and completed it, but still without learning to read. He drinks, but before analyzing with you this drinking tendency completely I beg you to examine the quite special attitude he presents when undressed.

Permit me in passing to recommend this examination of your patients. I know very often what is called propriety will interfere, especially when you have to do with women in investigations of this sort; but whenever it is permissible do not

neglect it. The physician, much more than the painter or sculptor, should have precise idées in regard to external conformations and attitudes. A painter that represents a muscular prominence where it does not normally exist certainly commits a fault, but this fault entails no grave consequences, and he may even find admirers of it. The physician that does not perfectly know the anatomy of external forms exposes himself to mistakes otherwise prejudicial, and it may happen, as I have sometimes seen, that he gives his professional attention to anormal prominence, a vertebra apophysis, under the impression that it is a gibbosity.

Now consider attentively the attitude of this patient, an attitude that I noted for the first time two years and a half ago. It is, as you see, well marked, and, moreover, none of the authors mention it. The trunk is inclined to the right; the vertebral column describes a curve with the convexity to the left; the right hand descends much lower than the left; the left lower extremity is semi-flexed; the buttock of this side presents a flattening, the gluteal fold being elevated; finally note that the heel of the left foot does not touch the ground.

This attitude, so characteristic, has never been pointed out, and yet it is a feature of a very frequent disorder, for this patient is suffering with sciatica. This shows you how the most apparent points in clinical medicine may remain for a long time unperceived. We carry with us, indeed, from our medical education a certain number of impressions from which it is extremely difficult to free ourselves. We have the habit of seeking only those things already described and it requires long practice to acquire that independence of thought that enables one to see beyond his preconceived ideas. Often in this manner one finds traits so plain that it is difficult to explain how they have remained so long unrecognized, and usually they are at first received, even by progressive minds, only with scepticism. When I described for the first time the gross articular lesions of ataxics, those arthropathies that nevertheless must have always existed, it was objected, particularly in Germany and England, that they were only to be seen at the Salpêtrière. This scepticism has since disappeared, and to-day no one longer doubts the existence of these joint lesions.

This special, characteristic attitude of a patient suffering with sciatica I have known scarcely two years. You may judge for yourself if there be chance for mistake. It is so pronounced that at first I asked myself if there were not pathological curvature of the vertebral column.

When the patient is seated you observe that the entire body-weight rests upon the right buttock, and that the left does not take part in the body-support. In this position you may also note

<sup>17</sup> Goodhart, London Lancet, February 26, 1887, p. 410.

the atrophy of the left lower extremity, which measures many centimetres less than its fellow. You have concluded that we have to do with a sciatica of long standing. In fact it dates back over five years, and is a sciatic neuritis.

Before explaining to you more fully this sciatic neuritis allow me to recall in a few words the history of the subject. Medically speaking, the history of sciatica goes back to Hippocrates; yet until the year 1764 there were on this subject but very vague notions. It was a Neapolitan, Cotugno, who first distinguished the *ischias nervosa* from *ischias arthritica*. Sciatica for a long time, and justly, bore the name of Cotugno's disease. That physician had the merit of clearly distinguishing sciatica from coxalgia. He well indicated the principal sensitive points encountered in this affection, and recognized that these points bore a relation to the course of the nerve.

A long time subsequently came Valleix with his anatomico-physiological theory. He wished to cast all the neuralgias in the same mould. This was an error. *Tic douloureux*, a neuralgia of the fifth pair, has a history of its own, brachial neuralgia has also its own habits. It is well understood that the course of the nerve and the sensitive points are to be considered, but further than this each neuralgia has its individual history. It is unreasonable in clinical medicine to bring everything into *rappor*t with physiology. I speak now, note if you please, of the physiology of the present day, which is far from being perfect. Physiology says that when a nerve is affected in any portion of its extent the pain is referred to the periphery of the nerve. Lesagne showed that in certain cases the nerve itself is painful and he came to distinguish two varieties of sciatica; one a sciatica with neuritis, the other, in which no lesion can be determined, is a neuralgia properly so-called. The former variety is an affection of long duration, accompanied often by eruptions, by zona, by various trophic troubles, and, as in the present case, by atrophy of an extremity; for we are confronted by a case of sciatic neuritis.

We may also determine the existence in this patient of the classical sensitive points. There exists a sacroiliac point, a gluteal point, an ischiatic or post-trochanteric point, and the last is strongly marked. Below we find many pectoral points, a peroneal point, a patellar point; finally an external malleolar point and a point on the dorsum of the foot. During the access of the disease, from these points radiate pains which communicate with adjacent points and the entire course of the nerve is painful.

Sciatica in the present case is incontestable; the diagnosis is not doubtful. Yet, there being this peculiar attitude I have described, the heel of the foot not touching the ground, you might possibly think that there is a coxalgia behind this sciatica. I wish to point out once more that

the flattening of the buttock and the disappearance of the gluteal fold to which surgeons attribute a great value in making a diagnosis of coxalgia, is no absolute indication. You know that every healthy individual can at will reproduce this same malconformation by taking the predetermined attitude. This demonstration has been made before you here by the models of the Art School whom I had summoned for that purpose.

If you place your patient recumbent, with the lower limbs extended, and then attempt to raise the left foot you provoke intense pain, because by this movement you stretch the sciatic nerve. At the same time you may note that the articulation is mobile and is not the seat of any crepitation—a sign evidently in favor of sciatica and, against coxalgia. If in spite of this you still entertain some doubt, you always, as a last resort, have recourse to anæsthesia; but I repeat, the diagnosis here is not in question.

This man, moreover, found himself in surroundings in which sciatica is most usually developed. He is a terrace builder, he worked in water. Upon leaving the regiment he was employed at plaster-ovens, but lodged in a very damp room. Add to this some alcoholic excess, and you have causes sufficient to explain the development of that affection against which for five years have been tried in vain the various modes of treatment, including vesicatories, the actual cautery, and the spray of chloride of methyl.

It now remains for me to speak of the treatment of this sciatica, but in place of so doing I prefer to go deeper with you in the study of this malady, and to see if behind this sciatica some other much more interesting affection does not lurk.

This man, as I remarked at the beginning of the lecture, has a well-marked air of hebetude. He is gloomy, discouraged, without ambition. His memory is obtuse. He dreams every night, has night-mare, the sensation of a strangling hand, sometimes he thinks he is falling from a precipice, but always with the left side foremost. Upon the dynamometer he registers 18.20.30, when he should indicate 80 and more. Finally, he does not digest his food well.

This lack of ambition, this amnesia, these nightmares and formulated dreams, did not exist six months ago. Previous to that date, in spite of his sciatica, he was able to work. He was not, it is true, particularly vivacious, but he earned his living. At that time, in an accident to a train loaded with ballast, he was wounded in the forehead. The wound suppurated; he had fever, and in eight or ten days this nervous state commenced, and has continued till the present moment.

If you join to the signs I have enumerated a quite peculiar pain in the head, a constrictive pain, which patients voluntarily compare to a

band of lead, which binds the head, you will have a complete picture of neurasthenia. With this man every effort of reflection is distressing; thought is, so to speak, painful. It is a complete neurasthenia of the same type as come upon young men undergoing examination for a higher grade or during preparation for a competitive struggle. Whether it develops in young men as the sequence of excessive intellectual work, or comes upon any one after a violent emotion or a cephalic traumatism, neurasthenia is always identical.

Here is the first point established; our patient is a neurasthenic. Is that all? Is not this man also hysteric? It is a question we will now try to elucidate.

Scarcely six years ago when one spoke of hysteria in the male, he only had in view the young men still in the family who as the result, for example, of opposed love, shut themselves in their rooms, wept, bewailed their lot, made verses and gave themselves up to a thousand eccentricities that were attributed to hysteria, the *petite hysteria*, as it was called. To-day we know that *grande hysteria*, true hysteria, occurs much more frequently in the male than was formerly supposed, possibly as frequently as in the woman, if not more so. We now make the point that every person who has fallen into a nervous state as the result of a traumatism, has the chance of becoming hysterical.

Hysteria is not comprised in the typical attacks, with their three characteristic phases, which are so frequently encountered in women. Beyond this there are slight attacks, and moreover there is a certain number of symptoms, which enable us to delineate this malady, where formerly it was not suspected. In this disease these symptoms have for us the same importance as the crepitan râle and the tubular breathing in thoracic affections.

The visual field of this patient is notably diminished. The contraction of the visual field is nearly an absolute sign of hysteria, outside of which we encounter it in but two conditions in epileptics immediately after an attack, and as the result of certain lesions of the internal capsule, which give rise at the same time to hemianæsthesia. Epileptics that have constant contraction of the visual field—and we have some such at the Salpêtrière, are at the same time hysterics.

If we now pass to the examination of the sensibility we see that there is an hemianalgesia of the entire left side, and, moreover, in the region corresponding to the ovarian region in women we find a fixed painful area, the only fixed pain the patient presents, with the exception of the pain in the head. This painful point in the iliac region, existing in man as in woman, proves clearly that the ovary here is not the cause, and that surgeons who remove the ovaries under the pretext of curing hysteria are at least blamable. As a

general rule the ovary has no part in the production of hysteria. Pressure on this painful point provokes in our patient irradiations to the stomach and neck. It determines a sensation of strangulation, and of throbbing in the head, accompanied by slight syncopal attacks. These sensations may arise spontaneously, and be followed by the same phenomena.

We now have sufficient data to give a diagnosis of hysteria in this case, and the picture I have just outlined you will always find identical with itself. Whether you have to do with traumatic hysteria, as in this patient, with hysteria the result of intense emotion, from loss of fortune or after intoxication or due to lead, mercury or alcohol, you will always find the same symptoms. The distinctions some have wished to establish among these various hysterias have no foundation in fact, and I defy those who pretend to recognize in hysteria symptoms varying according to the producing cause, to distinguish in the midst of a number of hysterics those that have saturnine hysteria from those that have the traumatic form. Hysteria is an entity whatever may be the cause.

I will remark in closing that our patient is predisposed to neuroses. Formerly he committed alcoholic excesses, and in searching his antecedents we find that a brother of his father died insane, that one of his cousins is epileptic, and finally that his own brother died epileptic.

Retain then the point that in clinical medicine it is sometimes necessary to go beyond the limits traced in your classical authors. It will happen to you to find undescribed features and striking ones even in an ordinary disease like sciatica. Moreover, remember that in nervous pathology diseases are often complex. A superficial examination shows you here but a common sciatica, and yet you have seen how we have discovered behind this sciatica both neurasthenia and hysteria.

## FETID MENSTRUATION, OR FÆTEO-MENORRHŒA.

BY WILLIAM B. DEWEES, A.M., M.D.,  
SALINA, KANSAS.

The natural odor of the menstrual discharge is peculiar, but not offensive. It is an odor *sui generis*, and has been compared to that of the marigold (*calendula officinalis*), fish brine, etc. It is most pungent in women of darker or lighter complexion, *e. g.*, in negro and in red-haired women it is often very strong. Virchow attributes it to the presence of fatty acids. But it is not the peculiar natural odor pervading menstruants that we wish to bring to the attention of the reader. It is the abnormal odor contracted by the flux at or before its emergence from the uterus. To dif-

ferentiate the two in all cases may become difficult, but the distinction must be borne in mind while endeavoring to make a proper diagnosis.

Every physician of experience no doubt has had—like myself—a number of cases of fetid menstruation—*Fluxus Menstrualis Fœtidus*—for which I would propose, in accordance with scientific nomenclature or nosology, the name of fœteo-menorrhœa (*Fœtes*)—and found them to arise from very different causes.

The disordered conditions with which the *dysodia* is most frequently found, are divisible into two classes—those of *general* and those of *local* origin. Not infrequently both are combined. To the class of general origin belong all impaired blood conditions—chlorosis, syphilis, etc. To the class of local origin belong, (1) prolonged retention and decomposition of the menses, (2) the discharges in certain morbid conditions and growths within the body of the uterus.

In chlorosis the catamenia is of a feeble type, and scanty, even if regular, the discharge is very pale, and in a large percentage of the cases it is greenish in color. It is in those cases presenting this greenish discharge that foetidity is apt to occur. In these cases the offensiveness is evidently due to the degraded blood-condition, for when this is corrected it subsides. The same principle holds good in cases due to simple anæmia, syphilis, etc.

Prolonged retention and decomposition of the catamenia may be produced by either mechanical obstruction, principally stenosis or flexion, or to deficient expulsive power of the uterus, both of which are often accompanied by a scanty flow. Many of the most severe and obstinate cases of fœteo-menorrhœa are due to diseases of the endometrium—in subinvolution, particularly of the placental site—after abortions and confinements; polipi, fibroids, epitheliomata, sarcomata, papillomata, etc. Occasionally cases present themselves evidently due to the gonorrhœal poison.

It is worthy of mention, that four very obstinate cases of this kind have been treated by the writer during the past year. The catamenia in these four wives were not only very fetid, but equally acrid, which seemed to excite a villous proliferation of the endometrium with a virulent discharge in the interim of the epochs, being most obstinate and persistent, as well as difficult of cure—producing excoriation of vagina, vulva, and parts with which the discharge came in contact of each of these four women, while in each of the four husbands they brought on perpetual attacks of urethritis. The cases were cured eventually by radical erosion and cauterization of the endometrium in each uterus, and by appropriate treatment of the husbands, together with enforced abstinence from intercourse for a definite time. Each and every one of these four men had primarily contracted clap and conveyed the same to their wives, followed by the results above delineated,

the wives being free from fœteo-menorrhœa prior to and since said infections.

As regards local measures other than operative procedures (such as erosion, removal of morbid growths and dilatations), injections and irrigations with deodorizing materials are very useful. Solutions of boracic acid, corrosive sublimate (1:2000), carbolic acid, iodine (1 to 40), and what I prefer to all of them, boro-glyceride and Listerine, in from 25 to 50 per cent. solutions. The general treatment in chlorosis, anæmia and other impaired blood conditions is chiefly to be overcome by the judicious use of arsenic, iron and quinine, while in syphilis iodide of potassium must remain our chief reliance.

Last, but not least, healthful, nutritious diet, open air exercise, proper and free use of water as drink and bath, sunlight freely welcomed, pleasant surroundings, cheerful society; etc., must always receive due recognition.

### SIMPLE SUPPORTS FOR USE IN ALL OPERATIONS ABOUT, ON, OR NEAR THE PERINEUM.

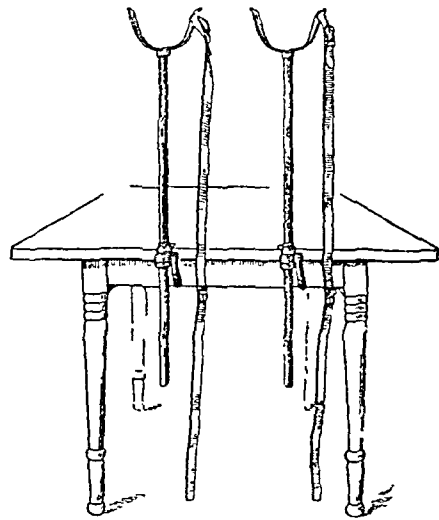
*Read before the Section on Gynecology, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

BY WM. C. WILE, A.M., M.D.,

DANBURY, CONN.

EX-VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION;  
MEMBER OF THE BRITISH MEDICAL ASSOCIATION; EDITOR  
OF THE NEW ENGLAND MEDICAL MONTHLY, ETC.

In all operations on the perineum, such as cutting for stone, plastic operations upon the vagina or uterus, the removal of piles, and every operative procedure around the genitalia and buttocks, when the position of the patient is in the dorsal



decubitus, it is necessary for the surgeon to have two assistants to hold the limbs in proper position,

namely: the legs flexed upon the thighs, and oftentimes the thighs upon the abdomen. Besides being tiresome for the assistants, their hands and arms, and even the feet and legs of the patient, are nearly always in the way, and while the will is strong the flesh is often weak, and the grasp on the limb becomes more and more loosened as the moments roll into the hours of the operation.

Many devices have been presented to the profession in order to obviate this difficulty, but they have all been impractical, cumbersome, or too expensive. The want of assistants just when most needed for this class of operations has driven me to devise the support which you see before you. In my hands it meets every requirement. The idea in a general way was derived from a pair somewhat similar in design, but not near so perfect in mechanical construction, in the office of Dr. Bernays, of St. Louis. The most desirable one must be one which will not impede the circulation of the blood of the limbs, or in any event do this as little as possible.

This instrument, as you will see, is placed in position only after the patient is put under the influence of the anæsthetic, and on the top concave bar rests the belly of the gastrocnemius muscle, while in slots on each side of this is inserted a strap which passes around the sole of the foot, keeping the leg from slipping down, which would cause undue pressure on the popliteal artery under the knee-joint.

Another excellent point about this instrument is, that the clamp holding the upright rod is so constructed that it is impossible under any strain which may be put upon it for it to slip, the clamp grasping every portion of its periphery. It was made for me by Read & Co., of Danbury, Conn.

## CEREBRAL ABSCESS FOLLOWING INJURY OF THE SKULL.

BY THOS. W. KAY, M.D.,

OF BALTIMORE, MD.

FORMERLY SURGEON TO THE JOHNNITER HOSPITAL,  
AT BEYROUT, SYRIA.

Murscha, æt. 28, black male, presented himself at the Johonniter Hospital on the 14th of May, 1888, with the following history:

Two years previous, while engaged in a quarrel near Jaffa he was struck on the head with a heavy staff and left for dead. He regained consciousness after several hours and from that time to the present has had no sickness of any kind, nor has he had paralysis or pain in the head.

He was in excellent health when he presented himself, being in full possession of all his mental faculties, and complained only of an offensive discharge from the head, which had been of six months' duration.

Examination revealed three sinuses over the right parietal eminence, and necrosed bone was found at the bottom of all of these; so I connected two of them by incision and removed, by sequesterium forceps, a piece of bone  $2\frac{1}{4}$  inches long by  $1\frac{1}{4}$  inches broad, consisting of both tables of the parietal bone. As soon as this was done between  $1\frac{1}{2}$  and 2 ounces of very offensive brain substance, which had not entirely changed into pus, escaped. After carefully washing out the cavity it was dressed antiseptically, and this was renewed every day.

Two days later several smaller pieces of the internal table were removed, and the cavity left, after the escape of the diseased brain substance had been carefully measured. It was found to be elliptical in shape, being  $2\frac{1}{2}$  inches long by  $1\frac{3}{4}$  inches broad, and 1 inch in depth. The direction of its long axis was represented by a line drawn from the post. inf. angle of the right parietal bone to the middle of its superior border, and its deepest point was just below the parietal eminence.

In a few days healthy granulations had sprung up, and by June 7 the cavity was so nearly filled that the man was allowed to leave the hospital.

It is interesting to note the length of time that elapsed between the receipt of the injury and the appearance of the discharge; and also the entire absence of any paralytic or cerebral symptoms after such a large loss of brain substance.

## MEDICAL PROGRESS.

TREATMENT OF SYCOSIS. — DR. GEORGE THOMAS JACKSON, in summarizing the results of treatment in 22 cases, says:

The first thing to be done is to open up the pustules and get rid of their contents. Epilation, soap frictions, and the use of the dermal curette all do this, and all proved beneficial—12 cases out of 14. After epilation or curetting, the chosen application should be made, whether as an ointment or oil.

In acute cases where there is much pustulation, epilate or curette, and apply boric-acid ointment, or Lassar's paste with salicylic acid. Give one-tenth of a grain of calcium sulphide in fresh tablet triturates every one or two hours. If an acute outbreak of pustules occurs under it, stop it until a subsidence of the eruption takes place, and then begin again.

In subacute cases where there is not so much pustulation, but more redness and the disease is more patchy, epilate or curette and use Bronson's ointment, or one of sulphur or tar or other mild stimulant. Or use soap frictions, followed by protective ointments.

In chronic cases epilate or curette, or apply a



solution of caustic potash carefully to diseased parts. Locally, employ strong ointments or solutions of tar, provided caustic potash has not been used. If caustic potash has been used, then apply a simple soothing dressing. The use of tar in alcohol, as proposed by Pick, of Prague, has of late given brilliant results in my hands in some cases of chronic eczema, and in the last few days has greatly benefited one of the cases here reported, one which had shown itself to be very obstinate. Soap frictions are also valuable at this time. As chronic and subacute cases may take on acute forms under stimulating treatment, we must be prepared at any moment to apply more soothing methods of cure according to indication. For the best effect from our local treatment we must insist upon our remedies being kept constantly applied during day and night. To the same end the patient is to be advised to shave himself about twice a week. This is not absolutely necessary, but facilitates the action of our applications upon the diseased skin. If a rhinitis be present, appropriate remedies must be used for that. While treating the skin affection we must not forget the man whom the skin clothes. We must address ourselves to the task of regulating the diet and general hygiene of the patient, and give medicine, if needs must, upon the same principles as we would if the patient came to us not for his sycosis, but on account of his poor general condition.—*Journal of Cutaneous and Gen.-Urinary Diseases*, January, 1889.

**INTERNAL TREATMENT OF ELEPHANTIASIS.**—THOMASZ, of Ceylon, says that in looking over the literature of the subject he has been "struck with the paucity of drugs, and even of other methods of treatment, either curative or palliative, for this chronic disease (elephantiasis), which is both an encumbrance to the individual affected and a loathsome sight to the onlooker."

As regards internal treatment, I am inclined to agree with Thomasz, and even with external remedies we are none too well provided. In spite of Hans Hebra's remark about the "*reichen Literatur der Therapie der Elephantiasis*" this author, in his monograph on this subject, only alludes to elevation and suspension of the diseased parts, graduated compression by means of flannel or rubber bandages, massage, galvanism, compression or ligation of afferent arteries, and section of nerves. Of course, inflammation, or eczema, is to be treated if present, but the list of applications, it must be confessed, is brief, and their effect not very great in checking the progress of the disease, if we except ligation of the artery—a really dangerous procedure.

Massage alone is the treatment (of course, we exclude amputation) for all forms of elephantiasis except that of the limbs. No internal treatment has so far as I am aware, been even proposed

with any reasonable hope of success, though I doubt not arsenic is daily employed by the votaries of that drug, and not unlikely mercury and iodide of potassium "on general principles."

Now that the *filiaria sanguinis hominis*, that curious parasite, with its intermediate host, the mosquito, has been shown to be the exciting cause of many cases of elephantiasis, of the scrotum at least, it would seem as if it might be possible to find some parasiticide which would nip the exciting cause of elephantiasis in the bud.

This, Dr. Thomasz believes himself to have discovered in the form of sulphide of calcium. He prescribes for an adult a 1-grain pill of the drug morning and evening, after meals, continued for a month, and then increased to 1½ grains, and, when tolerance is established, to 2 grains, twice daily, until a cure is effected. No unusual symptoms have followed the administration of these large doses of the drug. Inunctions and bandaging, in cases where this is practicable, are also practiced.

Thomasz has treated seventeen in this way. Seven, under six months' standing, were completely cured in one and a half to two months. Cases of longer standing were improved, but that is all that could be expected. These seventeen cases were seen in public practice. Twelve more cases seen in private practice from the day of the initial fever all recovered. In one or two cases relapses took place, which were promptly quelled by a brief course of the sulphide of calcium.

I am inclined to think well of this form of treatment in the early stages of elephantiasis due to filaria, and I even think it worth a trial in cases occurring in our own climate. It seems based upon reason, and should certainly have a fair trial. Of course, it has its limitations. Sulphide of calcium is not a discutient; at least, it cannot be expected to disperse connective-tissue hypertrophy.—*Ceylon Medical Jour.*, Aug., 1888.

**HÆMORRHAGE IN SALICYLISM.**—DR. LAURISTON E. SHAW reports two cases of hæmorrhage in salicylism, and says: The treatment of acute rheumatism by salicine and its derivatives is so widely popular that it is of great importance to consider carefully any drawbacks there may be in its adoption, especially if by so doing we may remove them. It might, perhaps, be urged that the hæmorrhage in the two cases related above was not the result of the drug administered, but was either a purely accidental occurrence, or was a manifestation of the purpuric tendency in rheumatic patients. Against such a suggestion I would point out that in these particular cases the symptom did not occur at the height of the fever, but at a time when its severity was already subdued by treatment, and the patient was suffering from one or more of the well-known toxic effects of the remedy. Moreover, the recurrence of the

bleeding when the drug was re-ordered or its dose increased in frequency seems to make the causal relation between the treatment and the symptom as clear as such relations ever are in medicine. It appears also to be reasonable to expect that, if patients bleed at all as a result of salicylism, they should do so from their gums, which are so liable to bleed in all hæmorrhagic states. That they do suffer from epistaxis is established beyond all doubt; the occurrence is mentioned by nearly all writers on this subject, and the fact was freely accepted by the physicians who took part in the discussion at the Clinical Society in 1881. Of 174 patients treated at Guy's Hospital by these drugs, I found that 6 per cent. were recorded to have had this symptom. Thus the difficulty is not to establish the existence of the hæmorrhage, but to satisfactorily explain how it is produced. In the first cases which I observed, I was struck by the bounding pulse which preceded the bleeding, and thought that some increase of arterial tension might be an important agent, but a more careful investigation showed that, although the pulse was large and forcible, it was of decidedly low tension, a fact which was confirmed by sphygmograms taken before, during, and after the period when the patient was thoroughly under the influence of the drug. It seems, therefore, that we must fall back upon some chemical or physical change in the blood which makes it more readily transude through the capillaries, or else upon some secondary change in the walls of the vessels themselves. The point of practical importance to which I would call attention is this. Although I have carefully watched these cases for some years, I have never observed epistaxis or any other hæmorrhage occur until several hours, and generally not until some days, after the more common symptoms produced by too large a dose have been well marked. These symptoms are deafness, headache, vomiting, tinnitus aurium, and an irregular and slow pulse, this being the order of frequency, with which they occurred in the series of 174 cases before referred to. It would, therefore, seem that if due regard were paid to these indications that the drug is beginning to produce its physiological effects, and an appropriate alteration made in the dose, the occurrence of loss of blood, which the patient can so ill afford, might be prevented. Patients differ very much in their susceptibility to these remedies, and the amount by which the dose must be reduced varies directly as the rapidity with which symptoms of poisoning are developed. A point requiring further investigation is whether the rather common practice of substituting salicine for salicylate of soda in identical doses, in cases in which the patient seems intolerant of the latter drug, is a thoroughly reliable proceeding. There is a general impression that salicine is less liable to produce ill effects than other preparations, but re-

corded cases do not fully bear this out. The chemists tell us that salicine is converted into salicylate of soda in the blood, and that, roughly, twenty grains of the original drug produce fifteen grains of the soda salt, and it is possible that any good effects which follow the substitution of one for the other might equally follow a corresponding diminution in the dose. In reference to this point, it is worth noting that in one of these cases, as well as in one of the fatal cases previously reported, salicine had been substituted for salicylate of soda two or more days before the hæmorrhage occurred.—*Lancet*, Jan. 19, 1889.

**THE DISINFECTION AND TEMPERING OF RUBBER DRAINS.**—The proper disinfection of rubber drain-tubes is of great importance; the more so, as its accomplishment is attended with considerable difficulty. JAVARO shows that tubes are usually so affected by the usual processes of preparation as to be very much injured, and then fail to realize their intended purpose. To avoid softening (more especially of the red varieties), he advises that for five minutes they be immersed in concentrated sulphurous acid. He urges that the red variety should always be used in preference to the white kinds, as being more suited to withstand injury during his process. In the acid, the tubes assume a dark-chestnut color, and become hardened. Then they are to be washed in alcohol, 75 per cent., and finally to be laid away in antiseptic preserving fluid—either 5 per cent. carbolic acid solution or 1-200 bichloride solution. Tubes so prepared will not collapse under even very considerable pressure. If they have become too hard, by working them between the fingers they can be much softened. After being treated in the acid, they are unaltered in any way further by preservation in antiseptic fluids. These tubes have now for a long time in his hands entirely replaced all other kinds, and he utilizes them for every possible purpose. They maintain their lumen even when placed between the ribs, and will not readily kink or become obstructed, yet are not so resistant as to exert dangerous pressure.—*Centralblatt für Chir.*, Aug. 18, 1888.

**CARDIAC TONICS.**—Digitalis still holds its place as the most powerful heart-tonic we as yet possess, and the most permanent in its effects. Strophanthus has been on trial for over two years, and it is difficult to decide in exactly what cases of cardiac disease it is preferable to digitalis. Nearly all observers confirm Fraser's original statements without adding any important new facts. However, GUTTMANN maintains that it cannot compare, either as a heart drug or as a diuretic, with digitalis. On the other hand, it was used in Bamberger's clinic with success.—*Dublin Journal of Medical Science*, December, 1888.

THE

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SATURDAY, FEBRUARY 16, 1889.

THE EDITORIAL MANAGEMENT OF  
THE JOURNAL.

The readers of THE JOURNAL have already noticed in the number for the 9th inst., the unexpected resignation of the editorship by DR. JOHN B. HAMILTON, and his reasons therefor. The Board of Trustees in accepting the same, promptly effected such arrangements for editorial management as will permit of no interruption or lack of efficiency in the work of that department of THE JOURNAL.

## EYE SYMPTOMS AND CEREBRAL LOCALIZATION.

MR. HENRY R. SWANZY'S Bowman Lecture on "The Value of Eye Symptoms in the Localization of Cerebral Disease," delivered on November 9, 1888, is an important contribution to cerebral surgery. The recent advances in this field have brought increased responsibilities and increased anxiety for the surgeon called upon to treat focal cerebral disease; and the responsibility and anxiety are perhaps greatest at the outset, when the regional diagnosis has to be made. It is therefore of the utmost importance that the symptoms of each case of focal cerebral disease should be carefully noted, and that each autopsy should be made with the greatest precision; furthermore, such autopsies should be conducted by skilful pathologists and microscopists.

Mr. Swanzy is inclined to believe that eye-symptoms are too often not looked for at first,

but are utilized rather as a *dernier ressort*. This is certainly a serious error; for not only are many of these symptoms of the greatest localizing value, but their very nature may render their discovery at a late stage of the disease impossible. In cerebral regional diagnosis the process of exclusion plays a very important rôle; a very large extent of the brain is in relation with the eyes, and it must be admitted that when a search for eye-symptoms in a case of focal brain disease gives but a negative result, this is so significant for diagnosis that it is almost as important as a positive result.

Mr. Swanzy dwelt in his lecture rather on the facts provided by clinical pathology than on those of experimental comparative physiology. He calls attention to the difficulty of distinguishing between direct symptoms and so-called indirect symptoms in focal disease. The former are those dependent upon the loss of function of the part in which the lesion is situated, and are the symptoms it is desirable to point out. The indirect symptoms are not the result of the local disorganization caused by the lesion, but of its pressure, of disturbances of circulation to which it gives rise, and probably also of inhibition effects, all of which are likely to interfere with the function of parts of the brain more or less remote from the lesion. The term "indirect" should be replaced by "distant," which is more suitable, and implies simply the one fact of which we are certain, and no more. But there is nothing in the manner in which focal eye-symptoms are presented that will enable us to distinguish between the direct and distant symptoms.

Clinically, focal eye-symptoms may be divided into those that depend on disturbances in the motor apparatus of the eyeball, including the intra-ocular muscles, and those that depend on disturbances in the special visual apparatus. In addition, we must consider symptoms due to lesion of the nerve of ordinary sensation of the surface of the eyeball. It is quite impossible to give an exhaustive analysis of the lecture in the space at our command; at most we can give but a summary of some of the more important points brought out by the lecturer. In regard to conjugate lateral deviation of the eyes, it may assist us in diagnosing a cortical or capsular lesion from one in the pons. It may aid us in deciding on which side of the brain a lesion is situated

when other symptoms are not readily observed, as in coma. The varieties of the symptom, when it is due to disease in the pons, may be of value in forming a refined diagnosis as to the precise seat of the lesion there. Gowers and Hennoch have observed loss of motion of the eyes upwards in lesion of the corpora quadrigemina. Paralysis of the upward and downward motions of both eyeballs, sometimes while ptosis, with the lateral motions are unimpaired, may be the result of a focal lesion involving the third nerve nuclei in the floor of the Sylvian aqueduct; and if attended by hemiplegia the lesion involves the pyramidal tracts, probably at the level of the anterior corpora quadrigemina, the posterior commissure, and the neighboring part of the optic thalamus. A symptom of lesion of the posterior quadrigeminal bodies is loss of the power of convergence, sometimes accompanied by paralysis of accommodation; though this may be regarded probably as a distant symptom in some cases. A remarkable, and as yet inexplicable symptom is a deviation of one eye downwards and outwards, while its fellow is turned upwards and inwards. It has been seen with lesion of the middle cerebral peduncle, and the lesion may involve the adjacent cerebellar substance.

While ptosis has no value as indicating the locality of a cortical lesion, according to Nothnagel it may serve in distinguishing a cortical lesion from one situated elsewhere in the brain, since monolateral ptosis, as the only focal symptom, occurs with cortical lesions only. Ptosis, as the result of a cortical lesion, is probably often a distant symptom. Double ptosis has been noted as the only focal symptom in a case of tubercular degeneration of the corpora quadrigemina. In this case the motions of the eyeballs were not impeded, and there was no defect of vision. Lesions causing bilateral paralysis of branches of the third nerve that are wont to be innervated together—loss of motion of the eye downwards or upwards, and double ptosis—are to be sought in the quadrigeminal bodies, since basal lesions do not give rise to similar paralysis. Ptosis on the side of the lesion is sometimes a symptom in disease of the pons, without paralysis of the other branches of the third nerve, except in so far as conjugate deviation is concerned, and without the third nerve being involved. Ptosis may also serve to localize a lesion in the crus cerebri, by

forming a factor of a crossed paralysis. When the third nerve is paralyzed by a lesion in the crus cerebri it is usually paralyzed as a whole; but paralysis of only some of the third nerve branches may be caused by a lesion of the cerebral peduncle, the branch to the levator palpebrae seeming to be the one most frequently involved alone. Nothnagel has described a rare form of ptosis, as a focal symptom, not dependent on a lesion of the third nerve. It may be called sympathetic or pseudo-ptosis, and is accompanied by other eye symptoms as well as by symptoms of vasomotor paralysis of one side of the body, such as elevation of temperature, and redness and œdema of the skin. In these cases, says Nothnagel, there are: 1. Apparent ptosis on the paralyzed side, owing to contraction of the palpebral aperture, but the lids can be raised. 2. Contraction of the pupil on the same side. 3. A shrinking back of the eyeball into the orbit, so that it seems to have become smaller. 4. An abnormal secretion of thin mucus from the corresponding nostril, of tears from the affected eye, and of saliva from the corresponding side of the mouth. This train of symptoms has been found in lesions of the corpus striatum.

Crossed hemiplegia is a common sign of lesions of the crus cerebri. A frequent form of it is paralysis of the third nerve on the side of the lesion, with hemiplegia, hemianæsthesia, often facial, and sometimes hypoglossal paralysis of the opposite side of the body. This lesion may implicate all or only some of the branches of the third nerve. The localizing value of crossed hemiplegia depends chiefly on the hemiplegia and paralysis of the cranial nerve coming on simultaneously. When the paralyzes do not occur at the same time, the presumption is in favor of two separate lesions, neither of which may be in the pons. Complete paralysis of the whole of the third nerve is almost certain evidence of a basal lesion, as is isolated paralysis of the fourth or sixth nerves. Paralysis of the sixth due to disease of the pons is accompanied by hemiplegia of the opposite side of the body; but paralysis of the sixth on the same side as the hemiplegia points to a cortical lesion, and is probably a distant symptom. Nystagmus is of no localizing value. Lagophthalmos—the eye-symptom to which paralysis of the facial nerve gives rise—is useful for localization, inasmuch as it helps differentiate a lesion in

the internal capsule, or in the facial motor centre of the cortex, from one implicating the portio dura in the pons; it is absent or very slight in the former cases, and often very marked in the latter.

It is rarely that the condition of the pupils is of much value in regional diagnosis. Their condition may assist in the differential diagnosis of the various states of coma, but it is not very reliable for localization. Persistent dilatation of one pupil would indicate third-nerve paralysis.

In regard to the symptoms derivable from the visual apparatus, hemianopsia is one of the most frequent and one of the most valuable symptoms. Complete and absolute lateral homonymous hemianopsia is valuable as showing that there is a lesion in the cerebral cortex, or in the course of the fibres between the cerebral cortex and the optic chiasma.

We regret that limitations of space do not permit a more extended consideration of this very interesting subject. Mr. Swanzy's presentation of the subject will repay careful study. The Bowman Lecture is published in the *British Medical Journal*, of November 17.

#### THE FORTIETH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

A recent letter from the Chairman of the Committee of Arrangements, Dr. H. R. Storer, informs us that the local arrangements for the fortieth anniversary meeting of the Association in Newport, R. I., are progressing very satisfactorily. Accommodations for all the Sections are to be furnished in one building, and in close proximity to the large hall for the general meetings. It should be remembered that the next meeting does not commence until June 25, when the hotels will all be open and accommodations abundant, and the early warm days of summer will make the sea air invigorating and pleasant.

We have also learned that the officers of several of the Sections are at work and making good progress in securing the promise of good papers and in arranging their programmes in such manner as to include both the reading of papers and the discussion of important questions. We trust the officers of all the Sections are equally active in the discharge of their duties. The experience of the last two or three years has shown that an early announcement of work for each Section in

THE JOURNAL, as fast as it is accepted by the officers, greatly encourages others to proffer their contributions. We will gladly commence the publication of all items furnished us under the proper headings.

#### A SUPREME COURT DECISION ON MEDICAL PRACTICE ACTS.

Some time ago an irregular practitioner named Dent was prosecuted in West Virginia for practicing medicine contrary to the provisions of the Medical Practice Act of the State, which requires every practitioner of medicine in the State to obtain a certificate from the State Board of Health that he is a graduate of a reputable medical college in the school of medicine to which he belongs; or that he has practiced medicine in the State continuously for the period of ten years prior to March 8, 1881; or that upon examination by the Board he has been found to be qualified to practice medicine in all its departments. The case was decided in the Supreme Court of West Virginia, and thence appealed to the Supreme Court of the United States, which gave the following decision in regard to the validity of the West Virginia Act:

"The power of the State to provide for the general welfare of its people authorizes it to prescribe all such regulations as may be necessary to secure the people against the consequences of ignorance and incapacity as well as deception and fraud. One means to secure this end is the method adopted by the State of West Virginia. If the means adopted are appropriate to the calling or profession, and obtainable by reasonable study and application, no objection to their validity can be raised."

It is to be hoped that this decision will set at rest a good deal of the discussion by some newspapers and irregular practitioners as to the constitutionality of medical practice acts.

#### EDITORIAL NOTES.

PROFESSOR JOHANN WAGNER, for nearly forty years Professor of Medicine in the University of Budapest, died on January 2. He was born at Komorn in 1811, and was graduated from the University of Vienna in 1835. His reputation as a physician dates from 1846, when he introduced the use of cold water in the treatment of typhus fever.

THE LADY DUFFERIN FUND for supplying medical aid to the women of India has now an annual income of 30,000 rupees (about \$15,000) apart from the large capital expenditure on hospitals and medical schools.

SMALL-POX AMONG THE INDIANS at Fort Buford, Dakota, has assumed alarming proportions. There have been six deaths in a little more than a week.

SCARLET FEVER prevails to an alarming extent at Bloomington, Ill., and Lima, Ohio, a number of deaths having occurred. In this connection it may be well to mention that a Bloomington paper wishes to have the Illinois State Board of Health done away with.

A DISLOCATION OF THE NECK occurred in a very peculiar manner at Sidney, N. Y., a few days ago, according to a press dispatch. A young lady attempted to raise a window sash, which was caught fast by ice that had gathered at the sill. The obstruction suddenly gave way, permitting her head to fly back with a violent jerk that dislocated the vertebræ of the neck. Her head, no longer sustained by the neck, dropped down on the right shoulder. The surgeon who was called to attend her succeeded in reducing the dislocation, and then adjusted around the neck a stout pasteboard collar as an artificial support for the head in its natural position. It is believed that in the course of time she will entirely recover, without any deformity of the neck remaining. So far she has suffered no great pain.

DR. A. BIRNBACHER has been appointed Extraordinary Professor of Diseases of the Eye at Gratz.

THE *Internationales Centralblatt für die Physiologie und Pathologie des Urogenitalsystems* appeared on January 1. Among the editors are Professors Preyer and Zülzer, of Berlin. The journal is published by Leopold Voss, of Hamburg.

DR. A. SIBLEY CAMPBELL, eldest son of the late Dr. Robert Campbell, and nephew of Dr. Henry Fraser Campbell, died at his residence in Augusta, Ga., on December 15, 1888, æt. 39 years.

DEATH DUE TO AN ILLEGIBLE PRESCRIPTION. — A. M. Jaubert has recently fallen a victim to a hastily and badly written prescription. His brother, a physician, wrote hurriedly, in pencil, for a

dose of antipyrin. The druggist was absent from his store, and his sister read the prescription as an order for atropine. Knowing that atropine was a poison, she at first refused to fill the prescription, but finally yielded to the importunities of the messenger. The dose was administered, and the patient soon died. The case shows the importance of writing legibly, of leaving a drug-store in charge of a competent person only, and of keeping poisons under lock and key.

THE KING OF GREECE has conferred on M. Pasteur the Grand Cross of the Saviour, the highest Greek Order, and has made Drs. Grancher, Roux, and J. Guyon Commanders of the same Order.

MR. EDWIN CHADWICK, C. B., President of the Association of Public Sanitary Inspectors of England, will be presented by the Association with a congratulatory address on March 2, on his having attained his goth birthday.

THE PLACE OF SACCHARIN IN PHARMACY is the subject of a pamphlet issued by PROFESSOR ATFIELD. This substance will be of good service in pharmacy in four ways. *First*, it will enable patients to take certain medicines in comparatively small bulk; thus, compound licorice powder or confection of senna may be reduced to one-half their bulk. *Secondly*, the intense sweetness of saccharin will mask the nauseous taste of certain medicines — cod-liver oil for example. *Thirdly*, patients obliged to avoid sugar need not be deprived of a sweet, for besides coffee, tea, cocoa, etc., many medicines can be made sweet by saccharin. *Fourthly*, saccharin, unlike sugar, being not liable to ferment, it may be used for permanent preparations that would spoil if made white sugar. Saccharin is a tolerably indifferent substance as regards incompatibility. Prolonged contact with strong alkalies is undesirable, and acids precipitate saccharin from a strong, but not from a weak, solution of a soluble saccharinate. In prescriptions for fluids, when a given quantity of syrup is ordered, an equal quantity of simple solution of saccharin may be dispensed. For a powder or confection, saccharin itself may be used. A large number of preparations commonly used and now made with sugar may be prepared with saccharin, and called by distinctive names, such as mist. cretæ sacc., pulv. glyc. co. sacc. concent., confec. sennæ sacc. concent.



THE VALUE OF "FIRST AID" INSTRUCTION was recently shown in Sheffield, England. A father discovered early one morning that three of his children, sleeping in the same room, were unconscious from inhaling gas. Hastening away for a physician he met two policemen, told them what had occurred, and continued on his way. The policemen entered the house, carried the children to the street, laid them on their capes, and began artificial respiration. It seemed at first that their efforts would be in vain, but they continued at work, and when the physician arrived the children were pronounced out of danger.

DR. W. THORNTON PARKER, Recorder of Association of Acting Assistant Surgeons U. S. Army, has removed from Newport, to 322 Benefit Street, Providence, R. I. He has also resigned his position of Local Secretary of the American Medical Association.

NORTH AMERICAN PRACTITIONER. — (The Journal of the Post Graduate Medical School of Chicago.) The first number of this new monthly medical journal has just made its appearance. It contains 48 pages, is published in good style, edited by Drs. Bayard Holmes and Junius C. Hoag, both talented young men, and published by Charles Truax & Company.

## SOCIETY PROCEEDINGS.

Philadelphia County Medical Society.

*Stated Meeting, November 14, 1888.*

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR JOSEPH M. PRICE read a paper on  
A CONSIDERATION OF SOME OF THE RECENT WORK  
IN ABDOMINAL SURGERY.

The operations of the various pathological conditions of the uterine appendages form, by all odds, the greater portion of abdominal surgery. The variety of conditions met here are almost past enumeration, each case varying in a manner peculiarly its own, both as to its exact causation, and in its relation to other abdominal viscera. Pus tubes may be one-sided or bilateral, and the same is true of ovarian cysts. These may be suppurating or simple, or gangrenous, by reason of a twisted

pedicle. Their adhesions may be nothing, varying from this to universal. As to the treatment of pus-tubes, now that their existence is acknowledged by all save a doubting few who, unable to recognize them, therefore discredit their existence—this is established past question in the minds of a majority of operators—removal at once on discovery is the fast and firm principle. The same may be said of ovarian tumors. Cysts of the broad ligament are also complicated or simple. Tubal disease may be found present with both ovarian and ligamental tumors. Hydrosalpinx and hæmatosalpinx, while we are often not able to differentiate before operation, may also complicate ovarian disease. Dermoid cysts also afford similar complications to those of other cysts and are quite as prone to suppuration. Tubal pregnancy is of late occupying a prominent place in operative procedures, as affording the greatest scope for surgical ingenuity, while it, at the same time, is not encouraging unless taken early and treated promptly.

Its diagnosis, so much discussed, is now, by common consent, regarded as doubtful before rupture, and if made as accidental, a happy-go-lucky guess, which is harmless, and satisfactory to the operator. Mr. Tait's remarkable experience in these cases is worth that of all other operators combined, and his opinion, to my mind, is of like value, worthy of the greatest respect. An expression of his opinion in regard to the diagnosis of these cases may not be without interest. He says: "The strangest thing of all to me is, that in the enormous experience I have now had of tubal pregnancy, I have never but once been called upon even to make an examination until the rupture had occurred, and in that case there was neither history nor symptoms which enabled me to do more than determine there was tubal occlusion.

"Not, indeed, until the rupture occurred and the abdomen was opened was a diagnosis possible. Under these circumstances, I think I may be excused for maintaining a somewhat skeptical attitude concerning the correctness of the diagnosis of those gentlemen who speak so confidently of making certain diagnoses of tubal pregnancy before the period of rupture, and who speak with equal confidence of curing the cases by puncture, either simple, medicated or electrolytic. I wish to say, that, after the period of rupture, a diagnosis can and has been made, in my own experience, in a majority of these cases. The great bulk of these utterances may stand very well in society discussions or in library papers, but they will not stand the test of bedside experience."

Operations for the removal of gall-stones offer great inducement for successful treatment. Treatment of the ileo-cæcal abscess of appendicitis by the abdominal section offers a direct method of dealing with this hitherto usually fatal or chronic affection. When the lesions are clear, the lat-

eral incision is the choice. The median section is, for many reasons, often advisable, and when there is any doubt as to the exact condition of the case is, perhaps, the best. The closure of the incision should be insisted upon, and drainage carefully established. To insist on strict antiseptis in an operation, and then to leave the abdomen open, appears to be a contradiction in terms, and is illogical.

A method of treatment of pelvic abscess, not in accord with the generally received methods, is that reported by Professor Martin, in the May number of the *American Journal of Obstetrics*. It is to treat the abscess by puncture through the vagina, and where there is difficulty or uncertainty in fixing and locating the tumor, to open the abdomen, disengage the mass from its adhesions, bring it down within reach of the trocar and, finally, puncture and introduce a drainage tube. The professor reports the three cases so operated upon, and says: "The wound is not washed out, and the tube remains for months after the patient has gotten out of bed." A brief discussion of this method seems not out of place. Any operator who, fearing to open the peritoneum, would prefer to puncture through the vagina, would have some measure of reason on his side. But to open the abdomen to free a mass from its adhesions, in order to bring it within reach of a trocar through the vagina, seems too fantastic in its conception to be entertained for a moment. As to Professor Martin's method of locating and fixing the tumor by abdominal section, making vaginal drainage, and closing the abdomen without attempt at removal of the tumor, I cannot but disapprove of it. In this case, only the operator's name makes it possible for such a suggestion to receive a following. When a man of Professor Martin's acknowledged ability, operative dexterity and skill, makes a suggestion, and gives it his sanction, it is taken as the gold of his experience, with the stamp of his approval. Ordinarily, this is worth much. But even genius is liable to err; and I believe that before long Professor Martin himself will relegate this procedure to oblivion, along with the other abandoned operations of our profession, and, if suggesting nothing new to replace it, go back to the older and, I am convinced, better plan of removal and drainage through the original abdominal incision.

If I open an abscess through any wall, why not drain it through the original incision? To open the abdomen simply to bring a mass within reach of a trocar after it has been freed from its adhesions, is on a par with making an incision over a diseased bone; carefully freeing the sequestrum, taking care also not to remove it; diligently suturing the incision, making a second incision, by whatever means fancy may dictate; introducing a drainage tube, and allowing the dead and stinking mass slowly to come away. I am sure one

method is just as logical as the other. The idea, too, of allowing a woman to carry a drainage tube for months, when a section, with the removal of the mass, will allow her, in the majority of instances, to go about well, free from such annoyance and discomfort, in three weeks, is preposterous. We are too far from Egypt and the pyramids to plow our ground with sharpened sticks. Whatever improvement is to be added to the technique of any operation, should be in the line of progress, and nothing should be proposed for the sake of novelty and innovation. Originators are few, imitators are many, and the harm done to suffering humanity by those who follow without thinking and without special training, simply taking the dogma of a leader, is incalculable. The treatment of any pelvic abscess simply by puncture and drainage through the vagina is, at best, a slow procedure and, I fear, will not give a measure of success comparable with the discomfort it so often entails.

In the light of the originality of its conception and importance, it would be unjust to conclude this paper without referring to the method of using hydrogen gas in the localization of intestinal wounds. This idea offers a still further field for investigation, and renders the surgery of gunshot wounds at once simpler and safer.

DR. THEOPHILUS PARVIN: My remarks will be chiefly in reference to the treatment of extra-uterine gestation. Quite agreeing with the writer that the certain diagnosis of this condition in the early weeks is impossible, and that the great majority of cases are recognized only after the rupture of the gestation cyst, I must think that those instances in which early recognition was asserted were altogether exceptional, and the recognition only a conclusion of probability, or a fortunate guess.

But an extra-uterine gestation being known, the question of treatment immediately presents itself. Different answers to this question are given. What may be called the American method, because more employed in this country than in any other, owes its origin to Dr. J. G. Allen, of this city, who successfully employed the faradic current for the purpose of destroying the life of the foetus. One of the criticisms made upon this method of treatment is that the proof of the extra-uterine gestation fails in that no product of conception is revealed, the *corpus delicti* cannot be found; there may be as many as two or three exceptions—that is, some time after foetal life has been destroyed an abscess has communicated with the exterior, and parts of the foetus been discharged. Nevertheless, the question has been asked whether, in the long list of cases in which electricity was employed, with such unusual success, there were some in which the fact of pregnancy was not conclusively proved.

In regard to those few cases of asserted intersti-

tial pregnancy in which the foetus entered the uterus, obedient to the electric stimulus, and then was expelled through the natural passages, I must confess to the least skepticism as to the correctness of diagnosis in all, for such a uniformity of successful results, the foetus in all cases behaving so well, seems extraordinary. Is it not at least probable that, in some instances, the rupture of the cyst would be into the abdominal, instead of invariably into the uterine cavity?

The injection of morphia into the fruit-sac, for the purpose of destroying the life of the foetus, is a method regarded with favor by some eminent German authorities. Even if always successful and devoid of danger, the same theoretical objection which has been made to the treatment by electricity applies to it. There are still other objections to both methods.

There remains the treatment by abdominal section. Now, this is applicable to cases of ectopic gestation, whether rupture has occurred or not, though in the former, it seems to me, it is imperative. Others beside Mr. Tait have had valuable experience in the surgical treatment of this affection, though none, probably, a tithe of his; thus, Worth has operated seven times with six recoveries, and so firmly convinced is he of the importance of abdominal section that he declares an extra-uterine gestation ought to be treated as a malignant tumor—that is, extirpated at the earliest moment.

At the Philadelphia Hospital, quite recently, the abdomen of a woman was opened on account of rupture of a gestation cyst. A large amount of clotted blood was found in the abdominal cavity, but no bleeding points discovered, and therefore no ligation of vessels was done, or extirpation of the fragments of the cyst. The woman's chances for recovery were vastly increased by the thorough cleansing of the abdominal cavity. After having witnessed several operations for extra-uterine pregnancy performed with great skill, and the results being uniformly favorable, I am more and more convinced that this is the method of treatment for all cases, the only exceptions being an abdominal pregnancy so far advanced that there would be hope of extracting a living child at term, and then the operation might be deferred until near the close of pregnancy, and an unruptured interstitial pregnancy.

A word as to tubal collections of pus in puerperal septicaemia. I cannot believe this is frequent, either from the few post-mortems of women dying of puerperal fever which I have seen, or from my reading; in the last edition of Schröder's *Obstetrics*, 1888, for example, it is stated that occasionally, or sometimes, such collections are found, I cannot, therefore, hope that any great diminution of the mortality of puerperal fever will come through removal of pus-filled tubes. The brilliant results obtained by Mr. Tait, and many

operators in this city whom I might name—the almost total exemption from mortality which their statistics show, must not mislead us, for there are dangers in abdominal sections, and patients may die shortly after a so-called successful operation. Thus, a little more than two months ago, in conversation with Dr. Lombe Atthill, of Dublin, he told me of a lady operated upon by a distinguished surgeon, and she perished from hæmorrhage a few hours after.

The treatment of pelvic abscesses by abdominal section is, of course, a valuable addition to therapeutic means. But are all intra-pelvic inflammations with suppuration amenable to this means? Given a case of inflammation adjacent to the uterus, the parts matted together making a resisting mass as large as the two fists, or larger, the patient suffering from the peritonitis, and having fever, can the offending pus be safely reached through the opened abdomen? Then, too, are there not other limits to the employment of abdominal section in diseases of women? I do not object to the removal of the tubes in cases of pyosalpinx, on the false ground that the woman is thus rendered sterile, for a tube so diseased can never have its functions restored—it is, hopelessly, remedilessly ruined. But what of the removal of the ovaries for pain, or for certain nervous disorders? Does such removal cure, or even palliate in the majority of cases? Here is a question that demands careful and large investigation. Doubtless, some cases of so-called menstrual epilepsy are benefited by the operation, but it is doubtful whether many absolute cures result. It may be questioned, too, whether pain in the ovaries, the organs being otherwise normal, the so-called ovaralgia, demand their extirpation. I have seen a woman whose ovaries had been removed on account of pain; the suffering returned as severely as ever, and then the stump of each pedicle was taken away, but not the slightest benefit followed—a year after the last operation she was as bad as before the first. I have myself removed the coccyx for well-marked coccygodynia, and for a time the benefit was marked; and then came just as severe pain in the sacrum as there previously had been in the coccyx. Let us honestly and impartially look at both sides of the picture, see the dark as well as the light offered, and not be carried away by contemplating only the latter.

DR. M. PRICE: I agree with Dr. Parvin and the writer that the diagnosis of extra-uterine pregnancy in the earlier period is simply a lucky guess. I must differ from Dr. Parvin, however, when he doubts the feasibility of operation in a pelvis full of a great mass of inflammatory thickening. No matter how great the mass or how extensive the adhesions, unless malignant, it can certainly be removed. I have had no trouble in tearing away adhesions until the mass in the pel-

vis was reached, a diseased tube found and removed, abscesses opened and drained. I have seen but one bad result and that was from the deprivation of food and stimulus; the nurse absolutely robbing the patient of it, a fact I did not discover until too late. I have encountered hæmorrhage from the tearing of adhesions but once, in which case it was controlled by three ligatures on the bowel itself. The cause of hæmorrhage in most cases of abdominal section is imperfect ligature. The ligature slips and the patient bleeds to death. In tearing adhesions from the broad ligament I once ruptured a vessel as large as the radial artery. I had no trouble from this after it was properly secured in the pedicle. The button is sometimes cut too short: the ligature which is holding the uterus between the broad ligaments like a guy rope cannot stand the strain, the pedicle slips out and the cavity is flooded. Here is one advantage of the drainage tube. It gives warning of such an accident. The nurse ought to be trained to recognize warnings so that the operator may be summoned without loss of time.

The question of antiseptics in these operations is an important one. I must protest against statements upon this floor that operators who fail to use chemical antiseptics should be held criminally responsible. I say they should never be used in the peritoneal cavity. They increase the risks and never benefit the patient. Cleanliness and readiness for emergencies are the requisites for abdominal surgeons. Mr. Bantock, and Mr. Tait since he has abandoned Listerism, have results fully as good as any operators in the world. Such statements must not be permitted. They bring danger and trouble upon fellow practitioners conscientiously striving to do the very best for their patients, and, therefore, rejecting antiseptic solutions, as dangerous in themselves, and as leading to dangerous neglect of cleanliness by a sense of false security.

DR. JOHN B. ROBERTS: I am one of those surgeons who believe that any person who undertakes surgical operations at this stage of the world's history assumes a grave responsibility, is guilty of a wrong to his patient, if he does not guide himself by modern teachings in regard to the prevention of septic accidents. At the same time I think that Dr. Price and others who think with him, are giving themselves unnecessary anxiety as to the force in jurisprudence of the expressions made upon this floor and elsewhere by surgeons who give voice to the modern theories of operators' responsibilities. The word antiseptic is misconstrued. It does not necessarily refer to chemical agencies. The point is, shall we have the old septic surgery or the modern non-septic surgery? So that infection be excluded it makes no difference whether we exclude sepsis by chemical agents, by heat, or by absolute clean-

liness. Under the influence of the teachings of Dr. Price and his brother and the results obtained by them and by their pupils, I have resorted with confidence to distilled water in abdominal and pelvic work. But that is simply a substitution of heat as an antiseptic agent; and it is antiseptic surgery that Dr. Price employs, or aseptic surgery if he prefers that term, when he takes scrupulous precautions to secure absolute cleanliness of hands and instruments and all the details of the operation. There is no necessity to quarrel about words. The fact is that it is the consensus of opinion of the men of the day who have a right to express opinions upon this matter, that the surgeon is bound to protect his patients by those means in which he has greatest confidence against the risks of sepsis, and that any operator who neglects this is guilty of a crime; and it is well to have that distinctly stated here and in all medical societies until the whole body of the profession realize that it is a cardinal principle of surgery. As I said before, we do not and need not pin our faith to chemical agents, though I am among those who find use for chemical agencies, but we must insist upon non-sepsis and then we will have the best possible results.

DR. H. A. KELLY: Some of my growing experience has led me to differ from some of the details of procedure recommended. Above all I do not think it imperative nor wise to operate upon pus-containing tubes and ovaries as soon as discovered. These cases are, with few exceptions, chronic in their course; I operated last spring upon a woman who had carried a pelvic abscess for nineteen years. The natural history of this disease is one of attacks of recurring localized peritonitis. During the attacks patients are very much prostrated and the danger of operation increased. I know of no other cases which improve so much and are so amenable to treatment. With rest and the use of hot water we will, after a few days or a week or two, find the great mass of fresh inflammatory deposit gone, and are then able to make out the outlines of the diseased uterus and tubes which we now find movable, and we can proceed to operate under more favorable circumstances. Where rupture has occurred and the inflammation is general, delay is fatal. Opening a sac which points into the vagina is in some cases far better and safer surgery than abdominal section. In a case which had been mistaken for typhoid fever, and in which an excellent gynecologist had clearly diagnosed pelvic abscess, but wisely declined abdominal section on account of her prostrated condition, I operated *per vaginam* in September. After determining by palpation the point of greatest fluctuation, I separated the anterior and posterior walls of the vagina by Simon's specula and, gently lifting the cervix, without making traction, burned a hole into Douglas' cul-de-sac, which was filled by the tumor, opening a

pus sac containing more than a pint of pus, washed it thoroughly, drained, and douched daily. The patient made an excellent recovery, walking into my office this morning. She was too weak for abdominal section and her life was thus saved.

Three years ago I was able, before rupture, to diagnose tubal pregnancy. I operated before rupture, but it is the foetus in my possession now. A pathognomonic sign, which we do not wish to wait for, is diminution, while under observation, in the size of a cyst presenting the other signs of extra-uterine foetation, due to absorption of the amniotic fluid. It only occurs after the death of the foetus. I am not a warm advocate of electrolysis, but it is an absurd mistake for an English writer to think that in America the sac is punctured in the operation of electric foeticide. The great difficulty with many cases put down on the lists as ruptured tubal pregnancies is that sufficient evidence is not presented to show us that the cases actually were pregnancies. Where the foetus is not found we want more than doubtful microscopic signs.

Among the recent advances in abdominal surgery I would call attention to an operation which I have devised to avoid the dangers of sepsis and hæmorrhage, and the dangers and annoyances of the extra-peritoneal clamp method of treating the stump in supra-pubic hysterectomy. I liberate and deliver the tumor with the uterus, and constrict the pedicle with a rubber tube, then trim off the tumor above the tube leaving a cupped stump. This I very carefully bring together by a continuous buried suture, beginning at the bottom, which runs to and fro on the stump until it is closed, so that the top of the stump now looks like the mouth of a purse. Then, raising this, I pass a stout ligature deep into the uterine tissue on either side below the rubber tube with a sweep of my needle, and, by tying this, ligate the uterine artery; then I cut the constricting tube, and if there is any hæmorrhage from the lips of the sealed canal, I pass another deep ligature on either side which controls all oozing. The abdominal cavity is now completely closed by stitching the peritoneum of the wall to the peritoneum of the stump, *above* the ligatures on the uterine artery, and leaving the sutures, which thus unite the two peritoneal surfaces, long. A gauze dressing is put over the whole. These ligatures are brought through a hole in the gauze and clamped in a pair of ordinary long-bite dressing forceps, effectually preventing dragging and inversion. These sutures can be cut in seven to nine days. The result is perfect. My friend, Dr. Polk, tells me he has a plan in its essentials very similar to this.

DR. J. M. BALDY: I quite agree with Dr. Parvin that it is a happy guess if we diagnose tubal pregnancy before rupture. In a case seen a year or more ago, all the signs which we

would expect in a case of extra-uterine pregnancy, were found present and a diagnosis made in accordance with these facts. An ovarian cyst was found at operation. It is claimed that such a mistake would not take place if due care were used. But such a well-known authority as Mann, of Buffalo, has made such a mistake; he treated his patient with electricity, killed the foetus, and later the case was operated on by Wylie, of New York, and no signs of extra-uterine pregnancy found. Dr. Kelly speaks of a shrinkage of the sac from absorption of the amniotic fluid being a pathognomonic sign of this disease. I have never heard of this being advanced as a sign by any one else, nor can I conceive of its occurring. Puncture, as a treatment, can be mentioned only to be condemned. Electricity has the advantage of being able to kill the foetus and of saving the woman from the horrors of a severe surgical operation. It, however, has its disadvantages; a mass is always left behind which will be likely to cause all the dangers that any other pelvic disease may; it often ulcerates out and it leaves the patient as much unsexed as the operation would. I think the gentlemen who remove other pelvic troubles with the knife and leave this one, are more than inconsistent. Again, rupture of some of the vessels in the sac wall may take place. Mann thinks that these dangers should not be taken into account, but as they form together quite a large per cent. of the total number of extra-uterine pregnancies, what sane man dare disregard them? The electrical treatment has its positive and immediate dangers. Janvrin has lost a patient by rupture of a blood-vessel, after killing the foetus. An electrical current passed through some pelvic growths always makes the patient worse. I have seen this happen in the hands of an experienced electrician, the patient being worse after every treatment. With the knife, no case has ever been killed, and when the operation is over no subsequent trouble can follow. The trouble can always be removed in the early periods. As soon as a probable diagnosis is made, a surgical operation should always follow.

In regard to operations for abscesses, I do not share Dr. Parvin's views, I think these large adherent masses can always be removed without danger, and that such should be their treatment. After once beginning the operation I should much more fear leaving it, than removing it at any cost: it is the incomplete operation which gives us the worse results. On the other hand, I most heartily agree with Dr. Parvin, that only *diseased* organs should be taken away. If the operation for vague pain, epilepsy, insanity, and nervous diseases has any place, it is only after the most careful consideration and consultation, and in the most conservative hands.

With regard to the fibroid tumors, I think with

attributable to a ruptured pyosalpinx; and he then described these also.

His conclusion was that abdominal section cannot be too strongly urged in every case of active pyosalpinx, from whatever cause it may arise, except in the rare instances where the uterine extremity of the tube is patent, so that pus can be squeezed out of the latter into the uterus; and excepting also those cases where, in addition to the tubal disease, the patient has some malady which will probably itself destroy life in a short time. If the distension of the tube were slight and gave rise to no morbid symptoms it was, no doubt, the wiser plan to wait, in the hope that the pus might become inert by undergoing cheesy degeneration. In other cases where the question of operation arose, massage, employed after the method of Brandt, was an excellent means of determining the patency of the tube and, should a communication exist between the tube and the uterus, it constituted, if properly practiced, a very valuable adjunct in the treatment. It might be, however, a very dangerous procedure in the hands of an inexperienced manipulator.

As to the diagnosis of pyosalpinx, he thought that a careful observer, experienced in this line of work, would not often make a mistake. The conditions from which it was usually necessary to differentiate were hydro- and hæmatosalpinx; but if the tubes were much distended, the question of ovarian or parovarian cyst would also have to be taken into consideration. The history of the case was often of the greatest importance in determining its true nature. While many gynecologists considered it unjustifiable to operate for hydro- or hæmatosalpinx, it was, unfortunately, an impossibility always to make the diagnosis before opening the abdomen; and, personally, it was his opinion that even cases of hydrosalpinx should be operated on if they give rise to serious symptoms which cannot be alleviated by other treatment, because the simple and inert liquid may take on purulent changes as the result of an inflammatory condition set up in the walls of the tube, or of the extension of endometritis. It was also a fact that, in consequence of their openings being blocked, the tubes might become distended to such an extent as to cause rupture, with the possibility of peritonitis resulting. In any case where pyosalpinx was supposed to exist and, laparotomy having been performed, it was found that hydro- or hæmatosalpinx was present, he was very positive that the tube should be removed (notwithstanding the fact that it did not at the time contain pus), provided that, at some point, it was firmly occluded from the effects of adhesive inflammation.

If we had reason to suspect active suppurative disease, laparotomy should be performed; from which procedure, even if our diagnosis should be erroneous, not much harm would result to the patient. If the diagnosis of pyosalpinx were

correct, however, an immense advantage would be conferred upon the patient, since, in the first place, the operation removed the pain incident to the condition, and changed her from an invalid to a healthy individual; and secondly, removed the danger of rupture of the tube and fatal peritonitis. It was true that, at the meeting of the American Gynæcological Society in 1887, a prominent German operator (Martin, of Berlin), had stated that his mortality from salpingo-oöphorectomies was over 12 per cent.; but it was to be borne in mind that the cases selected by him for operation were extremely unfavorable, since he always waited very long, and exhausted every other means of treatment, before resorting to it. It was against this very long waiting that Dr. Boldt said he desired to protest. Why let a patient suffer so long when, from the history and the physical examination, we have satisfied ourselves that she is suffering from a condition not amenable to non-surgical methods of treatment?

Prof. R. H. Chittenden, of the Laboratory of Physiological Chemistry at the Sheffield Scientific School, Yale University, recently presented his observations on the *Digestive Ferments* to the Pediatric Section of the Academy, and if his researches in regard to diastase are to be accepted as conclusive, the result will be a pretty hard blow to the various manufacturers of malt extracts who base the special value of their preparations on the large amount of this ferment which they contain. There was, he thought, no branch of medicine where an accurate knowledge of physiological processes was so necessary as in the pathology of digestion; and of late years chemical science had thrown much new light on the character of the digestive juices and on many hitherto obscure points in the metamorphism of the various food stuffs.

With all our present knowledge, however, he said we could not add much to the definition of a ferment current in the 14th century, viz.: "a force which without becoming weaker itself can produce great effects in other mains." While this was not strictly true, we could only wonder at the marvellous power often displayed by an infinitesimally small amount of a ferment, and endeavor to explain its method of action by the word catalytic, a term which clearly exposes our ignorance while it fostered our self-esteem. The amylolytic and proteolytic ferments were alike in that they act only in the presence of water, that the products of these, as a rule, contain more oxygen and hydrogen than the original matter, and that their action is most energetic at the body temperature. These two classes of ferments differed, however, in the character of the medium in which they act; the amylolytic being most energetic in a neutral fluid and wholly inactive in the presence of free acid, while pepsin acted only when in combination with an acid. Trypsin, also a pro-



teolytic ferment, on the other hand, acted best in an alkaline medium, although active also in a neutral fluid. These ferments were extremely sensitive to the action of foreign matters, and the simple changes of reaction from acid to alkaline, and *vice versa*, met with in the alimentary tract were sufficient to destroy the different ferments as they were exposed to the changed conditions in their journey onward; so that it was no doubt true that only such escaped destruction as were absorbed and ultimately excreted through the kidneys.

In presenting some of the results of his observations he insisted, very properly, however, that it was always to be borne in mind that the living alimentary tract is a somewhat different mechanism from a glass beaker, and that in the former we have to deal with a complication of conditions not met with in artificial digestines. When considering the action of the amylolytic ferment he took the ptyalin of saliva as an illustration of a normal digestive ferment, and the diastase of malt as a good example of a common remedial agent. In spite of its normal reaction being alkaline, the power of human saliva in digesting starch is far greater when the fluid is exactly neutral than when alkaline. The same is true of diastase, and when the alkalinity of the fluid is increased in either case the amylolytic action of the ferment is retarded in proportion to the amount of alkali carbonate present. The greater the dilution the greater the retardation, and dilute alkalies not only hinder the action of these amylolytic ferments, but also destroy them, especially at the body temperature; although their destructive power is not as great as their retarding action. Peptones and proteid matters in general, however, tend to diminish, and even prevent, in fact, the retarding and destructive action of the dilute alkalies. Hence, in the intestinal canal and elsewhere where the products of proteolytic action or the other forms of proteid matter are present, the amylolytic ferments can no doubt endure the presence of amounts of alkalies which alone would quickly lead to their destruction.

Towards acids both ptyalin and diastase are even more sensitive than towards alkalies. It had been generally held hitherto, and even now was to some extent, he said, that both these ferments regain their power of transforming starch into sugar when they reach the small intestine; this view assuming that in the stomach the activity of these ferments is simply suspended by the acidity of the gastric juice. He was quite convinced from his experiments, however, that the presence of a few thousandths of one per cent. of free hydrochloric acid is sufficient to quickly stop all amylolytic action; though it was to be remembered that because a fluid reacts acid to test papers it does not necessarily follow that it contains free acid. Hence the question of retard-

ation and destruction of amylolytic ferments in the stomach required further consideration. It was necessary to know how the presence of proteid matter affects the action of the acid of the gastric juice; and it was found by experiment that nearly all forms of albuminous matter prevent to a certain extent the destructive action of the acid. The acid-proteids formed, however, had more or less of a destructive action themselves, and when all the proteid matter present in a given mixture was completely saturated with acid (although no free acid might be present), the amylolytic ferments soon lost their power, and in a short time were completely destroyed. It followed, therefore, that the proteids of the food probably protect for a time the ptyalin or other amylolytic ferments, introduced in a very short time, by combining with the hydrochloric acid as it is secreted, these must become saturated, and free acid be present; and as soon as free hydrochloric acid is present, if not before, a rapid destruction of the amylolytic ferments will take place. To this destruction must be added the slower action of the acid-proteids.

There was, he thought, among many physiologists a growing impression that for from fifteen to thirty minutes after taking food an active digestion of starch goes on in the stomach. Ewald and Boas, however, had found that when starch paste was eaten free hydrochloric acid appeared very quickly—sometimes within ten minutes. These same investigations had also confirmed in part the statements of Prof. Chittenden regarding the action of acids in the amylolytic ferment of saliva by a series of interesting clinical experiments. The most important point in connection with these was the fact that such conversion of starch as did occur in the stomach under the circumstances noted took place during the first five minutes; the amount of sugar found in the ejected fluid being the same at the end of five minutes as at the end of twenty minutes. Furthermore, the amount found was quite small, indicating that the ferment was quickly stopped in its action by the acid present. He thought it could be safely concluded, therefore, that the action of the diastatic ferments can at best continue only for a short time in the stomach, and that the cessation of the amylolytic action is quickly followed by destruction of the ferment, through the action of the free and combined hydrochloric acid. Hence it was obvious that the administration of diastatic ferments, however active, by the mouth, with the intention of supplementing the pancreatic digestion of starch in the small intestine, can be of little value, since the ferment must inevitably be destroyed before reaching the seat of action.

The extreme sensitiveness of the amylolytic ferments towards acids, he went on to say, is substantiated by their behavior towards many common therapeutic agents. Many of the so-called

antiseptics and germicides likewise show marked action on these ferments. The bichloride, iodide and bromide of mercury all retard the action of the amylolytic ferments, even when present in only a few thousandths of 1 per cent. Mercuric cyanide, however, appears to increase their solvent action when present in small quantities; though larger percentages of it retard it. Sulphate of copper has a very marked inhibitory action, while acetate of lead has a retarding action only when present to the extent of 2 or 3 per cent. Arsenious oxide and ammonium arsenate in small fractions of 1 per cent. assist amylolytic action; but arsenious acid retards it. Tartar emetic in small amounts has a marked stimulating effect; large amounts, as 50 per cent., may noticeably diminish the quantity of sugar formed. Chlorate of potassium in small quantity increases the action, and the presence of even 5 per cent. of it has only a slight retarding effect, the same is true of chloride sodium. Many of the alkaloid salts have a stimulating effect, notably the sulphates of morphia, quinia, cinchonine, cinchonidine, and atropia. Sulphate of strychnine, however, has a slight retarding effect, and the same is true of antipyrin and antifebrin. Urethan in small fractions of 1 per cent. has a slight stimulating effect, and in larger amounts a retarding effect. Thallin sulphate in very small percentages has a marked stimulating effect, while peraldehyde has a strong inhibitory action. Of gases, oxygen and carbonic acid both decidedly increase the amylolytic action, while hydrogen noticeably diminishes the action of the ferment.

In treating of pepsin, as the best known of the proteolytic ferments, he called special attention to the fact that the acidity of the gastric juice is mainly due to free hydrochloric acid. While at many times, especially in disordered conditions of the stomach, there are present in its contents lactic, butyric, acetic, and possibly other acids, these are to be looked upon as the product of various forms of fermentation, rather than as secretory products from the stomach cells. The strength of acid best fitted for digestion depends somewhat on the amount ferment present and the character of the proteid to be digested; and it is also to be remembered that while the proteolytic action ferment is most vigorous in the presence of hydrochloric acid; other acids, such as phosphoric, nitric, sulphuric, oxalic, acetic, lactic, hydrobromic and hydriatic, will to a greater or less extent take its place. Whenever bromides and iodides are taken into the stomach it is supposed that they are decomposed by the action of the gastric juice, with the formation of hydrobromic and hydriotic acids respectively; by which the retarding action of these salts on gastric digestion is produced. Hence, as a practical result, the bromides and iodides should be given half an hour to an hour before meals. There are

many diseased conditions where imperfect digestion is due as much to the want of necessary acid as to lack of ferment. Thus, in fevers, as a rule, a less active gastric juice than normal is secreted. The acidity is frequently diminished, and, therefore, as Ewald has remarked, there was some basis for the old habit of prescribing phosphoric or hydrochloric acid in fever mixtures.

The length of Professor Chittenden's valuable paper precludes any further recital of its contents. It can only be said, in conclusion, that he spoke favorably of the action of trypsin and pepsin as solvents of pseudo-membranes, and that he believed the latter of the two to be the more energetic agent in this capacity.

P. B. P.

#### WASHINGTON LETTER.

*Materia Medica Department of the National Museum.*

No visitor to the National capital interested in pharmacology should neglect to see the materia medica collection to be found in the south-west corner of the National Museum. The more liberal minded of our profession do not hesitate to acknowledge the truth that Dr. Oliver Wendell Holmes has enunciated with such forcible brevity in regard to the misfortune that would befall the fishes and the benefit that would accrue to mankind, in case all medicines, with but few exceptions, were sunk in the sea; but as the effect of age with a certain amount of misfortune and sickness are incident to all pursuits and conditions of life, it is the part of wisdom to try to deaden their blows. Perhaps in no department of life have human foresight and human wisdom been more exercised than in finding remedies for the various ills of humanity, and as long as the race exists mankind will be interested in the materials and methods used for the prevention and cure of disease, and it may be further remarked that there is no fairer gauge of the intellectual development of a people than that afforded by the remedial measures in use.

The museum scheme of classification having provided a place for a collection of all the substances furnishing medicaments, Dr. J. M. Flint, of the Navy, has, with commendable diligence, arranged and classified an exhibit of not only all the officinal and galenical preparations, but of a second exhibit of Chinese and Korean medicine, and the medicines of the North American Indians, which in a sense bear the same relation to the former exhibit that a teratological collection does to the other specimens in an anatomical museum.

It would be superfluous to mention by way of praise the intelligent discrimination shown in classifying the collection, which speaks for itself in such a way that the visitor, like the stranger at St. Paul's Cathedral, has only to bear in mind

the admonition to look around in order to see the monumental success that the curator has achieved.

From Dr. Flint I learn substantially that in considering the physical relations of his collection he has arranged the animal products according to the zoölogical position of the animal from which the drug is derived, following the usual classification, and beginning with the *class* Mamalis, *order* Carnivora. The vegetable products are classified to the botanical affinities of the plant furnishing the drug. Products of fermentation and distillation, including the products of the acetous and vinous fermentations, and the derivatives, chloroform, ether, and the like, as well as distillates, such as carbolic acid, pyroligneous acid, etc. Inorganic products are arranged according to their fundamental elementary constituents, following the classification of the chemical elements.

As a whole the collection already represents the principal drugs in most of their commercial varieties in present use among civilized people, including most of the new remedies that have lately been introduced to the notice of the profession.

Without going into further details regarding this interesting collection, we may summarize what has been accomplished. The organization of the *Materia Medica* section of the Museum is complete; the classification has been established in its details; over 5000 specimens have been received, examined, and registered, and most of them bottled and arranged according to the classification; the whole collection has been provided with temporary labels, and over 600 specimens with permanent labels, each requiring a study of the specimen and of the literature regarding it; illustrations of most of the medical plants have been obtained and more than 500 of them mounted and on exhibition; a medical herbarium has been commenced and its development is assured; a complete catalogue of this collection has been made, by means of which any specimen on exhibition may be readily found, and a considerable library of reference has been formed; the Pharmacopœas of nearly all nations have been obtained, and half the work of compiling a compend of sixteen of them is done.

In the future development of this section of the Museum a wide field is open for valuable work. The collection as it now stands includes samples of the great majority of the drugs found in the commerce of the country, as well as many specimens of rare drugs or varieties known only to foreign medical practice. It remains now to make use of the prestige of the scientific institution with which the Museum is connected, and of the ready means at the disposal of the National Government, through the naval and consular services, supplemented by personal correspondence with importers and their agents, and foreign scientists and

travellers, to gather materials and information that shall be rare and valuable. Much is still to be learned regarding the source and mode of production of many of our standard drugs, and new remedies of doubtful origin are constantly appearing in the market. For the increase of our knowledge of these substances, for the investigation of these questions of doubt, no more favorable conditions can be conceived than those here existing, namely, a great Museum under the patronage of the Nation, associated with a scientific institution of world renown, having correspondence with all parts of the world and friendly relations with scientific establishments in all countries.

R.

### Migration of Foreign Bodies.

*Dear Sir:*—THE JOURNAL for January 19 contains a notice of the "Migration of a Needle." The strange coincidence of reading about this case, and having passed through some little experience coming under the same head, I take pleasure in presenting the facts in the case for the information of your readers. The literature on foreign bodies found in all parts of the body is so profuse and general, that it necessarily requires something more than the ordinary daily routine of cases to be of sufficient interest to place the facts upon the pages of some medical journal.

The history of cases is generally shrouded in doubt and uncertainty. It is always well to listen to the details, and then digest the facts. One case of an ordinary pin escaped the closest examination in the throat of a woman for *eleven years*. The case was subjected to repeated and minute inspection at the hands of able and competent practitioners. The patient had repeated and severe attacks of trismus, lasting for days; the salivary glands were swollen, deglutition was difficult, thirst urgent, and sometimes a high grade of irritative fever. An abscess subsequently formed in the sublingual gland, from which, after an incision, I removed the pin, heavily coated with the ordinary deposit peculiar to the secretion of the gland.

Another case of a portion of a needle traversing the body of a man for seven years, and upon one occasion, in withdrawing his arm from his coat, the movement was suddenly arrested, accompanied with an attack of pain. The needle had protruded through the skin and caught in the lining of the coat; its removal was prompt and easily accomplished.

In the case of a fat, healthy baby sliding over the floor, after several days' crying and fretting, with repeated severe applications of the mother's hand to the very part of suffering, a close examination revealed the presence of a foreign body. With a bistoury passed through a fold of integument I withdrew, with a pair of forceps, a full

No. 7 needle, much to the comfort of the child, to the surprise of the lookers-on, and a certain rebuke to a very unkind mother.

The case to which I specially desire to call attention is the following:

In the afternoon of January 19, 1889, Miss S., æt. 18 years, was taking a lesson in dancing. While moving over the floor to the strains of the waltz music she was suddenly seized with the most violent excruciating pain in the right iliac region. She was carried into the adjoining room in an unconscious condition. The lookers-on describe her appearance as terrible and alarming. After the lapse of ten or fifteen minutes a transfer was ordered, and by a slow process of movement she was conveyed to her home. I saw her at 6 P.M., lying upon a lounge, with her limbs so decidedly flexed upon her body that I at once suspected either peritonitis or a hernia. She could not be touched, her pain was so intense. I insisted upon the removal of her clothes and the placing of hot poultices over the abdomen, gave  $\frac{1}{4}$  gr. morphia internally, directing the mother to send for me after she had been placed in bed, and especially if any evidence of a swelling was visible. I was summoned to her home at 8 P.M. I at once completed my examination; seemed to feel a sigh of relief when I discovered that it was not a hernia. Immediately over the ileo-cæcal region I found a small prominence, which to the touch evidenced a foreign body. In moving the finger downward a sense of relief was imparted to the patient, and any movement in the opposite direction gave rise to intense pain with loud screams from the patient. The proof seemed so positive that we had a foreign body and its prompt removal was beyond any doubt, that I at once began a series of questioning as to what it might probably be. The patient had no knowledge of ever having swallowed anything like a pin or a needle—was positive no needle had ever entered any part of her body. The location left no doubt in my mind that it was evident that it had escaped from the bowel. If this surmise was correct, what did it mean—certainly a great risk of traumatic peritonitis. Having a full knowledge that the *laparotomies in our county* had not been blessed with very flattering results, I explained the case in all its bearings to her family and suggested a consultation with some of my colleagues. I called to my aid Drs. G. T. and G. S. Carpenter, who coincided at once with the full nature of the trouble and the importance of prompt surgical interference.

The patient was placed under the influence of chloroform, the necessary details of antiseptics were brought into requisition, and after making an incision, immediately over the projection, through the fatty tissue, and gentle manipulation with a pair of forceps, a portion of a needle was withdrawn—black and thoroughly corroded—measur-

ing one and three-eighths inches in length. The wound was sutured, dressed antiseptically, and the patient placed in bed.

The patient had  $\frac{1}{8}$  gr. morphia with  $\frac{1}{4}$  gr. of calomel every two or three hours, as required. No bad symptoms supervened. The wound healed kindly, and at this writing the patient is perfectly well.

We have no evidence as to how or when this needle entered the body of the patient.

I have the record of a number of minor cases, the removal of pins from the upper part of the larynx, from the ears, etc., which are commonplace items for the general practitioner, so I will not intrude them upon you. Very truly,

D. W. BEARD, M.D.

Pottsville, Pa., Feb. 5, 1889.

### The Necessity of a More Careful Study of the Pulse.

*Dear Sir:*—There are many reasons why a careful study of the pulse demands the attention of the general practitioner of medicine at this time. Among these permit the writer to name the following:

1. The pulse is disturbed by almost every departure from a normal state of health.
2. The pulse is recognized as a symptom in every abnormal manifestation.
3. To examine the pulse and determine its value as a symptom is one of the first duties of the physician at the bedside of the sick.
4. The large number of deaths from heart disease have alarmed the public, and magnified the importance of every means for diagnosing diseases of this organ, and intensified the necessity for every man who practices medicine to understand the different modes of examining the pulse, and how to apply the information derived therefrom in determining the condition of the great central organ of the circulation.
5. The conditions that affect the pulse and the nervous manifestations through which the pulse is modified are not thoroughly well known, and the same pulse may be the result of different causes.

6. The pulse as a symptomatic phenomenon, can only be valuable as a means in diagnosing different pathological conditions and abnormal manifestations, by determining the cause that produces the different modifications in the character thereof. A weak, quick pulse, from *stenosis* of the left *ostium venosum* cannot be accepted as a symptom of scurvy, or the numerous diseases where this same pulse is to be met. Nor can a small hard pulse resulting from *stenosis* of the *aortic ostium* be taken as an evidence of the different inflammatory conditions, remote from the heart that produces the same kind of a

pulse. This makes a better acquaintance with sphygmology necessary.

7. The sphygmograph which only gives the tracings of the pulse, and the sense of touch in the finger of the examiner are not sufficient as reliable aids in examining the pulse so as to elicit all the facts that other instrumental aids and appliances can bring out, as has been demonstrated by certain mechanical contrivances devised under the direction of the writer, and which have by him been experimented with sufficiently to warrant the conclusion here stated. The writer feels justified in making the assertion that the sense of touch is no more accurate in arriving at the tension, the fulness, size, equality, or regularity of the pulse, than in arriving at the temperature by the same sense. The sphygmograph gives the tracings, but a most delicate instrument and careful experiments are necessary to bring this out so as to give a correct condition of the different phenomena that actually occurs during the different manifestations of the heart's force, as modified by the force exerted, the resistance to overcome, and the conditions of the channels through which the blood current is propelled.

We offer these reasons from an honest conviction of their importance to our profession. In proof of the reasons we here offer, we shall, at a future time, offer some arguments and some experiments, unless some one who is making the subject a study will present such facts as will supersede the necessity of any facts or opinions the writer has at his command.

This is one of the inquiries that must engage the best thoughts of the members of the profession, to enable us to come before the tribunal of public sentiment with such evidence as the age demands.

J. W. HERVEY, A.M., M.D.

Indianapolis, Ind., Jan. 31, 1889.

#### Treatment of Pseudo-Membranous Laryngitis or Croup.

Dear Sir:—Some time in 1887 my attention was called to the fact that some pepsins (notably the vegetable product styled "papayotin" by Parke, Davis & Co., and "papoid" by Johnson & Johnson), will digest diphtheritic membranes; it will digest those that are true false-membranes and not infiltrations of the mucous membrane. Acting on this hint I have applied the same treatment to membranes within the larynx, by making a solution (3j to f3j water) and using it *very frequently* as a spray by means of the hand-ball apparatus. Where the child resists, as is common, I sometimes use an oval speculum. Of course this does not supersede other treatment. I have not had an opportunity to use this often enough to generalize, but I have succeeded in saving every case of croup I have treated since commencing to use it; and I verily believe that,

where it is used thoroughly and effectively, it will cure almost every case in which the membrane is confined to the upper part of the larynx. I have published a detailed account of a case or two, but the account had no widely known name behind it, and I do not think the plan has attracted the attention it deserves. Should this treatment commend itself to our judgment are we not in a position to obtain a trial of it in a sufficient number of cases to prove its efficacy? It certainly can be no detriment; it precludes no other treatment, nor the resort to tracheotomy or intubation—operations seldom done outside of the large cities. I have never been able to get the consent of the parents to tracheotomy but once, and then only at the last minute. And even if we could always perform tracheotomy when indicated, it would be much more pleasant for all concerned to be able to save the patient without it. Very truly yours,

O. B. ORMSBY, M.D.

Murphysboro, Ill.

#### MISCELLANY.

NEW YORK STATE MEDICAL SOCIETY.—The following officers were elected at the annual meeting of the Medical Society of the State of New York recently held in Albany: President, Dr. Daniel Lewis, of New York; Vice-President, Dr. Alfred Mercer, of Syracuse; Secretary, Dr. F. C. Curtis, of Albany; Treasurer, Dr. Charles H. Porter, of Albany.

MEDICAL VOLAPÜK.—Dr. Nicolas, a gentleman with evidently a strong faith in his cause, advocates, in the *Journal de Médecine de Paris*, the adoption of the international language for medical purposes. His sketch of Volapük is flattering to that tongue. The article is abolished and, better still, there are no genders. We agree with Dr. Nicolas that the presence of a declension is an obstacle to the diffusion of the language. As the cases are said to cover indefinite shades of expression, as in German, we doubt that such an arrangement would be tolerated outside Germany, German Switzerland, German Austria, and the "Pennsylvania Dutch" speaking population of the United States. The lexicology of Volapük is especially important to medical writers who believe in the establishment of that language. The cutting down of consonants and vowels would play havoc with roots of Græco-Latin words, so abundant in medicine and so generally understood as to answer most of the objects of a universal language. Terminal syllables modify the sense of roots. After the roots have been learnt, however, the modifications must not only be learnt, but understood. Thus "eye" is *log* in Volapük. *El* being a "professional termination," *logel* means "oculist." The adjectival termination *ik* makes *logik*, "from whence 'logamikel,' optician." Why "from whence?" How can *cl* added to a simple root be universally understood to imply a professional man, and the same *cl*, added to the adjectival modification of the root, be safely made to convey the idea of a tradesman? A Volapük paragraph on "Professional Etiquette," a fine familiar subject for the beginner, would be very interesting to study. Dr. Nicolas cannot see his way to forming from *log* words to express "ophthalmia," "cataract," or "blepharitis." We cannot help him. The building up of roots taking in tow a string of modifying terminals could alone settle the question on Volapük principles, and this arrangement would

lead to endless confusion in medical literature. The literal translation of any word would be no guarantee of its true sense, just as *Beispiel*, the German for "example," has been rendered "by-play" by ignorant, yet too philological, Britons. The use of prepositions, or of verbs which more or less obviate their use, would lead to inextricable confusion whenever a Frenchman attempted to explain a clinical history or pathological report to an Englishman or German. For precision is absolutely imperative in such reports. To ask for a pint bottle of claret or the way to the post-office can often be done by means of nouns, infinitives, and pantomimic action. Volapük might prove of real use, under similar circumstances, in Russia, Portugal, or Hungary. But for medical literature and for learned society oratory, the new language would be, we believe, impracticable. The bulk of the profession in the British Empire and the States read few or no foreign works. On the other hand, there are plenty of doctors who make capital translations of French and German medical writings. Far easier and infinitely more profitable would it be for any medical man to learn the tongues of Voltaire and Goethe than to attempt to get up an artificial dialect, devoid of precedents, prestige, or poetry, and to learn how to express "eye," "oculist," "visual," "optician," and "ophthalmia" by a root and terminals in such a manner that a foreign Volapük scholar may, by chance, understand him.—*British Medical Journal*.

**ABNORMAL CHILDREN.**—Dr. Shuttleworth recently made a tour in Norway for the purpose of visiting institutions for imbecile children in the vicinity of Bergen and Christiania. He found the buildings well adapted for their purpose, the schoolrooms admirably equipped, and the provision of the teachers liberal, twelve pupils being the maximum number in any one class; carpentry, tailoring, and shoemaking are included in the industrial course of training. At Christiania, Dr. Shuttleworth inspected the classes for "abnormal children" who, from nervous or mental defect or peculiarity, could not keep pace with the curriculum prescribed for ordinary scholars in the public elementary schools. The question of the care and management of imbeciles and "abnormal children" is being investigated by a Royal Commission presided over by Lord Egerton, of Tatton, and a committee of the British Medical Association, is conducting an inquiry as to the number of abnormal children in primary schools in England and Scotland, so that full information will soon be placed before us. The new County Councils will, we presume, have to make provision for such cases, and any information as to the modes of management in other countries is most opportune at the present time. It appears probable that many defective children can be taken care of and educated under due supervision, without being removed from their homes to large and expensive asylums.—*British Medical Journal*.

**THE EIGHTH CONGRESS FOR INTERNAL MEDICINE** will be held at Wiesbaden on April 15-18, 1889, under the Presidency of Professor von Liebermeister. The following subjects will be discussed: "Ileus and its Treatment;" Referees, Curschmann and Leichtenstern. The "Nature and Treatment of Gout;" Referees, Ebstein and Pfeiffer. Professor Immermann will read a paper on "The Function of the Stomach in Tuberculous Phthisis," Professor Peterson one on "The Hippocratic Methods of Treatment," Professor Fürbringer on "Impotentia Virilis," and Professor Lewin on the "Preparation and Action of Medicines." Dr. Emil Pfeiffer, of Weisbaden, is Secretary of the Congress.

#### PAMPHLETS RECEIVED.

Newman, Robert, M.D., New York. *A Defense of Electrolysis in Urethral Stricture, with Documentary Evidence*. Reprint from the Medical Register, January 5, 1889.

Wilson, L. D., M.D., Wheeling, W. Va. *A Case of Nephro-Lithotomy; Recovery*. Reprint from the Medical News, December 22, 1888.

Knapp, Philip Coombs, A.M., M.D., Boston, Mass. *Some Post-Hemiplegic Disturbances of Motion in Children*. Reprint from the Boston Medical and Surgical Journal, November 22, 1888.

Brown, Charles W., Elmira, N. Y. *Railway Injuries*. Reprint from the New York Medical Journal, December 22, 1888.

Coe, H. C., M.D., M.R.C.S., New York. *The Immediate Application of Forceps to the After-Coming Head in Cases of Version with Partial Dilatation of the Cervix*. Reprint from the Medical Record, January 19, 1889.

*Proceedings of the Twelfth Convention of the Empire State Association of Deaf-Mutes*, held in Rochester, N. Y., August 29-30, 1888.

#### *Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 2, 1889, to February 8, 1889.*

By direction of the President, Lieut.-Col. Joseph C. Baily, Asst. Medical Purveyor, and Major Charles L. Heizmann, Surgeon, are detailed as members of the Army Retiring Board at San Antonio, Tex., convened by War Department order dated January 16, 1888, published in S. O. 12, Jan'y 16, 1888, from Hdqrs. of the Army, vice Lieut.-Col. Edward F. Vollum and Major Francis L. Town, hereby relieved. Par. 15, S. O. 28, A. G. O., Washington, February 2, 1889.

By direction of the Secretary of War, Col. Jedediah H. Baxter, Chief Medical Purveyor, will proceed to New York City on public business connected with the Medical Department, and on completion thereof return to his station in this city. Par. 17, S. O. 30, A. G. O., Washington, February 3, 1889.

By direction of the President, in pursuance of the authority contained in the provisions of the Act of Congress approved March 3, 1887, "making appropriations for sundry civil expenses of the Government," etc., relating to the methods of preventing the spread of epidemic diseases, Major George M. Sternberg, Surgeon U. S. Army, will proceed to the Island of Cuba for the purpose named in the letter of the President addressed to the Secretary of War April 17, 1888, and upon completion of this duty will return to his proper station and submit his report to the President. Par. 16, S. O. 30, A. G. O., Washington, February 5, 1889.

By direction of the Secretary of War, Major George M. Sternberg, Surgeon, is relieved from duty as attending surgeon and examiner of recruits at Baltimore, Md., to enable him to comply with the requirements of paragraph 16, S. O. 30, of the 5th inst. Par. 4, S. O. 31, A. G. O., Washington, February 6, 1888.

Capt. Louis A. La Garde, Asst. Surgeon, leave of absence granted in S. O. 290, December 13, 1888, from this office, is extended three months, by direction of the Secretary of War. Par. 2, S. O. 31, A. G. O., Washington, February 6, 1889.

Capt. Edgar A. Hearn, Asst. Surgeon, Ft. Snelling, Minn., will proceed without delay to Ft. Pembina, Dak., and report to commanding officer of that post for temporary duty. Par. 3, S. O. 12, Hdqrs. Dept. of Dak., St. Paul, Minn., January 31, 1889.

#### *Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending February 9, 1889.*

P. A. Surgeon J. H. Hall, ordered to Naval Hospital, Washington, D. C.

Surgeon H. C. Eckstein, detached from U. S. S. "Adams" and wait orders.

Surgeon W. S. Dixon, detached from special duty at Baltimore, Md., and to the U. S. S. "Boston."



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## ORIGINAL ARTICLES.

### A CASE OF REFLEX VALGUS.

*Read before the American Orthopedic Association, at Washington,  
September, 1888.*

BY GEORGE W. RYAN, M.D.,

SURGEON TO THE ORTHOPEDIC CLINIC OF THE MEDICAL COLLEGE  
OF OHIO, CINCINNATI.

Early in May of the present year I saw a robust lad of ten years, who was brought to me for advice concerning a deformity of his foot. He wore an apparatus which had been applied by an instrument-maker, but there had been no improvement in his condition, the father stated. The foot was in marked valgus as he walked, though there was little if any lameness. The history of the case was that some months before he had sprained the ankle, but it was not thought to be of much consequence, and with domestic treatment passed off in a few days. It was some weeks after this injury when it was noticed that, in walking, the foot was thrown in marked eversion. He complained of no pain and was, in fact, unaware of the changed position of his foot until his attention was called to it. He was fond of play, and his activity was in no way diminished by the position which his foot assumed. The condition was believed to be "a habit," to use the father's words, and his pride was stimulated in various ways in an endeavor to have him overcome it. It was of no avail, however, and the family physician was consulted. The patient was turned over to an instrument-maker, who constructed a simple apparatus of two steel uprights and an instep strap attached to an ordinary leather shoe. This had been worn for two or three months when I saw the boy. There was no appreciable improvement from its use.

I made no inquiries concerning the family history, though the father was a man of highly neurotic temperament.

The examination of the foot showed a marked valgus with a slight prominence of the scaphoid, the arch being as well marked as on the other foot. There was no swelling of the joint, no tenderness—in fact, nothing abnormal but the position. He had complete motion in every direction but inversion, and in this lacked but a few degrees of perfect. When the foot was brought to the

straight line the prominence of the scaphoid was not apparent. I was careful to notice this, as the father informed me that the physician who had previously seen the case was inclined to think that a slight displacement of that bone was the cause of the trouble.

There was a little atrophy of the calf—so little that it could have been but physiological. There was no contraction about the hip or knee, nor was there any tenderness. I examined the spine carefully for a trace of tenderness, but found it sound in all respects. I did not use any electrical test for the muscles of the leg.

The case impressed me at the time as a pure valgus, due possibly to a traumatism. The absence of pain and tenderness, and also of marked atrophy, certainly excluded any bone lesion. The boy did not seem to be of a neurotic type, having no resemblance to his father; and further, he looked upon any treatment as a burthen which would interfere with his accustomed out-door enjoyment. He was a sturdy, outspoken boy, and was irritable only on the subject of the apparatus, with which he found all manner of fault.

I recommended the cold douche and massage for the leg, and measured him for an appliance which consisted of a highly arched steel plate to which the foot was bound by straps of webbing, a shaft extending up the inner side of the leg, with a free joint at the ankle; the shaft or spring to be thrown out from  $10^{\circ}$  to  $15^{\circ}$  from the straight line. This was applied about a week later, and its immediate effect was perfect. He walked with the foot in the straight position. He was ordered to wear it day and night.

I did not see him for ten days or more, when he came to my office. It was reported that the foot was not doing so well and that he was beginning to turn it out as before. It was admitted that the apparatus had not been worn constantly, as the boy complained of it at night. He certainly did not walk as when he was last seen, but not so badly as reported. As the foot was released from the appliance it seemed to immediately settle into a more extreme eversion than I had before found. There was no excoriation, hardly a redness of the skin. On taking hold of the foot, I found the peronei group of muscles firmly contracted; the contraction coming on as the foot was touched.

The spasm was of the tonic type and relaxed only after several seconds of gentle traction, and was marked also when an attempt was made to apply the sole plate to the foot, and intensified as pressure was made by the straps to draw the foot to the straight line. This was a new development; at least, I was very much inclined to believe so, as I had examined him very carefully at the first visit and had detected nothing of this. The father knew nothing of it and I believe the boy was unconscious of it, for I tested him in various ways, by attracting his attention to other matters which would interest him thoroughly, and while so interested, if the foot were touched the contraction again came on. There had been no pain, there was no swelling or tenderness, and he was as active as usual, walking without lameness. This symptom seemed to be brought on by the use of the shoe and to be purely reflex. I believed that it might be overcome in a few days by the constant use of the appliance, and so advised, though I then thought that probably the case might have been a reflex—"hysterical," if you choose—one from the beginning. At any rate, I concluded to try the support for a short time. The promise was readily given that this course would be followed, though I had some doubt of it. I have not seen the boy since. The father came to see me just as I was about to leave the city in July. He said that the boy was no better, turned his foot out as much as before, and that peroneal spasm was the same. I told him to let me see the boy on my return and I would then dress the foot in plaster of Paris after the method used by Lorentz, of Vienna, in the treatment of ordinary flat foot.

Reviewing the case now I am of the belief that it was a neurosis, but if I was asked why so, I would be unable, perhaps, to say more than that I could think of nothing else, and also that the spasm of the peronei group did not imply anything more than a neurosis. As I have attempted to show in the preceding notes, there was nothing else which led me to this conclusion. I am unable to say positively that the condition was of reflex origin. There was nothing in the boy's temperament, his habits or surroundings, or in his manner, to point towards anything bordering on the hysterical. It was certainly not a spinal arthropathy.

The neuroses of joints must have, I think, a peculiar fascination for every orthopedic surgeon, for the reason, perhaps, that their solution is generally a difficult matter. In the ordinary diseases of joints we generally see them at second hand, where no special skill is necessary to make a diagnosis—it proclaims itself. I have found more difficulty in diagnosing obscure ankle troubles than in any other joint, the hip or the knee being far more easily managed. I can recall several cases which I have seen in the past few years,

most of them in consultation, where I insisted on further examination before giving an opinion, the symptoms about the ankle were so conflicting and obscure. In the hip or knee we are often able to determine at once the presence of the neurotic element. In the spinal arthropathies of children this is easily found, and its removal a question of but a few days.

The management of these neuroses of the ankle, it appears to me, presents unusual difficulties. If there be any genital irritation, of course that is easily disposed of, but when no spinal arthropathy or genital irritation exists there is very little that we can do in young children but to give general directions concerning exercise. Many of these conditions pass off without treatment as easily as they come. Tenotomy is often done for some of these neuroses, but it will be questionable as to whether any permanent benefit can be obtained from it. I am inclined to think that, when there is such marked spasm of a single group, the fixed dressing would be more serviceable than anything else.

114 West Ninth St.

## MERCURIC BI-CHLORIDE IN DIPHTHERIA.

BY JNO. S. COLEMAN, M.D.,  
OF AUGUSTA, GA.

For my views in regard to the use of mercury in diphtheria I am indebted to the publication in Squibb's *Ephemeris* of a letter from the late Dr. Reiter, of Pittsburgh, Pa. Prior to 1883 I had successfully tracheotomized two cases of laryngeal diphtheria, but only to see both patients die. The first survived the operation three days, but the second only two hours—death ensuing from a collapse of the membrane below the opening in the trachea.

On April 26, 1883, I was called to visit J. C. C., æt. 6, one of a family of seven as fine, healthy children as I have ever known. He had decided fever with diffused redness of the whole fauces. Next morning dirty-yellow looking patches were to be seen upon either tonsil. On the 29th, at 9 A.M., this exudation had developed into a thick yellowish-white substance presenting the appearance of a fried egg. The next day he died of laryngeal stenosis. My associate in the case pronounced it to be the most malignant he had ever seen. Each day the children were fully examined; three of them had the ordinary exudative sore throat.

On the evening of May 6 a robust little girl of three years was found to have fever with intense redness of the throat.

May 7, A.M. A slight exudation was apparent; Temp. 101° F.; P.M., Temp. 102° F.

May 8, 9 A.M. She has passed a restless

night. Temp.  $103.4^{\circ}$ . Whole fauces covered with a thick dense deposit. 4 P.M. The membrane is apparently thicker than at morning observation. Temp.  $103.8^{\circ}$  F. So far as I could determine her condition was now as hopeless as was her brother's twenty-four hours before his death. With the boy I was anxious to use corrosive sublimate, but was dissuaded from so doing by two of the oldest and most distinguished of my confrères.

Convinced that the girl, too, must succumb, I determined to test the virtue of mercury. At 5 P.M., forty-eight hours after the onset of the disease, I began the use of hourly doses, one-eighth grain each, of corrosive sublimate. After the sixth dose her skin became moist and her temperature was reduced to  $100^{\circ}$  F. The interval between the doses was lengthened to two hours.

May 9, 9 A.M. Patient had slept well, excepting when aroused to take the medicine. During the night her bowels were moved three times; the actions, though small, presented the chopped-spinach like appearance so characteristic of the full effect of this remedy. To Dr. Reiter, this result was the index either for lengthening the interval between, or for diminishing the size of the doses. Her skin was moist and temperature normal. 4 P.M. I found the child bright and playful; large pieces of thick, typical membrane have been ejected in the "gagging" efforts produced by the medicine. The tonsils were now covered by a thin yellow film. 10 P.M. The patient was apparently so much better that the interval between the doses was increased to three hours.

May 10, 9 A.M. Patient had passed a restless night; two movements from bowels. The membrane had re-formed. Temperature normal. The hourly doses were resumed, and continued for sixteen hours, when an exfoliation of the membrane again took place. The interval between the doses was again increased to two, four, and finally six hours.

The further progress of the case was without incident. During the nine days of medication 84 doses were given, amounting to ten and a half grains.

In spite of the condemnation of this use of bichloride mercury by an eminent American authority, I have persevered with mercuric bichloride in diphtheria. Whilst it has been my good fortune not to see many cases, those I have seen have been safely conducted back to health. The terribly fatal nature of this malady forces me to crave the patience yet awhile of my professional brethren. Therefore, I shall give in detail the conduct of two other cases to a successful issue. To my mind tracheotomy and its recent substitute, intubation, are but temporary makeshifts, and in the large majority of cases futile. The disease being a blood-poison, our efforts must be directed to its destruction in and elimination from that fluid.

Late in the afternoon of December 11, 1888, I was called to see Ivey, æt. 6, the daughter of T. C. H. She had been sick for one week, but had not had medical attention. Her cough was shrill and raucous, with almost complete aphonia. A blistered surface upon the front aspect of her neck nearly two inches square was covered by a greyish dirty-looking pellicle. There was a slight rise in her temperature and a pulse-rate of 130. There was neither redness nor exudation to be seen in the fauces. I prescribed  $\frac{1}{32}$  grain of corrosive sublimate, to be given each hour, two teaspoonfuls of whisky every four hours, and all the milk that she could be induced to take.

December 12, 9 A.M. No material change. The dose of corrosive sublimate was increased to  $\frac{1}{16}$  grain.

December 13. The patient was less hoarse, and her expectoration free.

December 15 the interval between the doses was increased to two hours.

December 17 there was so marked a change for the better in her condition that her mother was instructed to give the medicine once in four hours, and on the 20th the original dose of gr.  $\frac{1}{2}$  was resumed and administered night and morning for several days, and then entirely withdrawn. Convalescence from this time was uninterrupted.

On December 17 my attention was called to Nellie, sister of Ivey, aged 16 months. She had a decidedly husky voice, some increase of temperature, and a pulse-rate of 120. She, like her sister, had neither redness nor exudation in the fauces. I directed that she should be given hourly gr.  $\frac{1}{2}$  of corrosive sublimate; every two hours a teaspoonful of whiskey, and milk *ad lib.*

December 18 the child was bright, but her hoarseness had increased; complete aphonia. The mercury was increased in the evening to  $\frac{1}{16}$  grain hourly.

December 19, A.M. The constitutional symptoms were ominous, circulation bad, respiration rapid and labored. Still no implication of the fauces. P.M. She was seen, with me, by an esteemed medical friend who, after a careful examination, said: "This child will die."

December 20. I found no material change, but by evening her respiration was still more hurried, pulse quickened and skin hot. The thermometer was not used because of her irritability. One-eighth of a grain of corrosive sublimate was now directed to be given hourly. This dose was continued for seventy-two consecutive hours; *nine grains in three days*. Notwithstanding this enormous amount of the drug the bowels were scarcely sufficiently moved. Nausea and occasional vomiting were necessary results. Such resistance to the usual effects of this remedy can be accounted for only upon the theory that *diphtheria induces a tolerance for mercury*. The same

dose was continued for several days, but at longer intervals. At my visit on the morning of the 26th a devoted woman who had assisted in nursing the children handed me a piece of dried membrane about  $2\frac{1}{2}$  inches in length, the upper portion seemingly about two-thirds the circumference of the trachea of a child of that age. She stated that it, with about as much more, had been ejected after a violent fit of coughing and in which she thought the child would certainly die.



False membrane ejected on tenth day by Nellie Hunter, aged 16 months, December 26, 1888, after seventy-two consecutive hourly doses of one-eighth grain each of mercuric bi-chloride. Recovery complete.

After putting the specimen in alcohol I showed it to a physician, who thought he could see six impressions of tracheal rings. In the upper and broader portion three rings are beautifully and distinctly outlined. The membrane is of the thickness of heavy blotting paper. The hoarseness was materially benefited by a saline vapor from a large kettle upon the grate. By this means the atmosphere of the room was subsequently kept moist. The mercury was continued in  $\frac{1}{2}$  grain doses morning and evening for several days and then withdrawn. The convalescence from this time was uninterrupted.

It may be well to state that after the ejection of the membrane by Nelly both children were given, because of cardiac indications, three-drop doses of tincture of digitalis every six hours.

January 24, 1889. Both children have made good recoveries.

THE Chief of Police of Berlin has ordered the hospital authorities to note the numbers of the carriages in which patients are taken to the hospitals, and the nature of the diseases of the patients. When the patients are suffering from infectious or contagious diseases the carriages are to be disinfected.

## RECURRENT FATTY CYST OF THE ORBIT.

GROWING FROM THE EXTERNAL SHEATH OF THE OPTIC NERVE.  
REMOVED MAY, 1878, AND AGAIN, JANUARY, 1888.

BY J. H. BUCKNER, M.D.,  
OF CINCINNATI, OHIO.

J. O., a young girl, *æt.* 10 years, was brought to my office in the early part of May, 1878. A soft elastic tumor projected from the external canthus of her left eye, overlapping and pressing the globe inwards and upwards. The pupil was almost entirely covered by the upper lid on account of the displacement, and her vision in that organ was consequently reduced to a bare perception of large objects. Vision of R. E. normal.

The growth of the tumor had been exceedingly slow, making but little progress for two or three years from the time it was first noticed by her, until a few months prior to her visit to my office, when it began to enlarge more rapidly. Her relatives belonged to the laboring class, and could not give a definite history as to the time of its first appearance; and, as its growth had been so slow after it emerged from the orbit, it had probably started during early infancy, if it was not congenital.



As will be observed by the photographs, herewith submitted, Jessica was a well developed child for her age. The second photograph was taken about two months subsequent to the removal of the tumor, and shows that the displaced eyeball had regained its normal position.

*Operation.*—About the middle of May, 1878, (my notes do not give the exact date) assisted by Drs. C. S. Muscroft, Jr. and L. McLean Slough, my little patient was anesthetized with chloroform, and I proceeded in the following manner to remove the tumor. The conjunctiva was slit

vertically over the swelling, and, with probe-pointed scissors, separated from the external portion of the growth, the cyst wall was quite thin and was snipped at one or two points, but, owing to the semi-solid character of the contents, but little was evacuated. I then proceeded to separate the cyst from the globe and surrounding cellular tissue with the handle of a scalpel, and, with the probe-pointed scissors going deep into the orbit. My assistant rotated the ball inwards, until, following the cyst wall, I could feel, with my little finger, the optic nerve, the wall of the cyst partly enveloping it, and being, apparently, a continuation of the external sheath of the nerve. With great care I divided the cyst wall with my scissors as closely as possible to the nerve.



The contents of the deeper portion of the cyst were much softer than the external part, and escaped when the cyst was divided; it was lardaceous in appearance and consistency. The orbital cavity was thoroughly cleansed by syringing with clear, cold water; *no antiseptics being used.* The edges of the mucous membrane were united with three or four interrupted silk sutures, and a compress wet with cold water, applied over the closed eyelids. The cold water dressing was continued for twenty-four hours, there was but little inflammatory reaction, and the wound healed by first intention.

The sac and its contents were sent for examination, to Dr. L. R. Longworth, who was at that time, about eight months prior to his death, an ardent student of pathology and microscopy. He pronounced the contents of the cyst to be chiefly fat and epithelial scales.<sup>1</sup>

The vision of Jessica, two months subsequent to the operation, was normal. After the second photograph was obtained, I did not see her until she came to my office in January, 1888. I found the left eye squinting inwards about four lines. Upon raising the upper lids a soft swelling was

discovered, occupying the superior and external angle of the orbit. L. E. V.— $\frac{2}{3}$ , R. E. V.— $\frac{2}{3}$ . She had first noticed the return of the tumor during the summer of 1887. There was but little exophthalmos, however, the stiffness and immobility of the eye, and the comparatively rapid growth of the tumor, made her anxious to have it removed.

She was admitted to the Eye Ward of St. Mary's Hospital on January 21, and on the 25th of the same month, assisted by Dr. Bertling, who administered the chloroform, I proceeded to dissect the cyst from the globe and surrounding cellular tissue; the cyst enveloped the ball for fully half of its circumference. She behaved badly under chloroform, and the thin cyst wall was clipped at several points, allowing its fluid contents (which were of the consistency and color of thick cream) to flow off. This also made the dissection difficult and tedious.

Deep in the orbit, the cyst was so closely adherent to the surrounding adipose tissue that much of the latter was also removed. The most thorough antiseptic precautions were taken in this operation; the instruments and sponges being cleansed with a solution of bichloride of mercury, 1 to 5,000; and after the removal of all the cystic membrane I could find, the cavity was cleansed with the same antiseptic wash. The conjunctiva was united with two or three silk sutures, and a compress wet with the sublimate solution applied over the closed lids.

The operation was followed by intense inflammation of the cellular tissue of the orbit, of the conjunctiva and of the eyelids. Upon the third and fourth day the swelling of all the tissues surrounding the ball was so great as to prevent the possibility of inspecting the cornea, which I fully expected would slough as the result of the surrounding pressure.

On the second day ice compresses were tried, but finding the application of heat to give greater relief, the hot water dressing was substituted, and continued until the subsidence of the swelling. Four-grain solutions of cocaine and atropine were frequently instilled into the conjunctival sac, and the inflamed tissues were irrigated with the antiseptic wash as hot as it could be borne, every two hours.

There was but little discharge throughout, and on the sixth day the inflammation began to subside by resolution. The only damage to the cornea was a small ulcer near the centre, which soon healed. The ocular conjunctiva, externally and inferiorly, still remains red and thickened. The outward movement of the eye is yet limited, due, probably, to the stretching and weakening of the external rectus. The squint is reduced by measurement to one and a half lines, but she now has diplopia, which did not exist previous to the operation. Her vision remains the same, viz.  $\frac{2}{3}$

<sup>1</sup> This case was reported to the Cincinnati Academy of Medicine during the winter following the operation, but, after a careful search of the *Lancet* and *Clinic* of that period, I do not find that it was ever published.

for the left, and  $\frac{2}{3}$  for the right eye, with D. 1 Sph. V. L. E.  $\frac{2}{3}$ . The diplopia is overcome by a prism of  $10^\circ$ , and will, no doubt, be relieved when the exudation, resulting from the inflammation of the orbital cellular tissue, has been absorbed, and the external rectus has regained its normal strength by exercise and contraction. Otherwise the advancement of the external, and tenotomy of the internal rectus may be necessary.

The cyst removed in this case was of the class termed dermoid, the etiology of which is, in a great measure, a matter of speculation. The tendency to recur is a subject of more importance to us. The four cases reported by Dr. Fox, an epitome of which was published in the *Archives of Ophthalmology*, Vol. XIV, do not furnish the requisite data, on account of the shortness of time since the operation, to judge of the efficacy of his method of treatment with nitrate of silver. The same may be said of Thompson's case, treated by electrolysis. I doubt if either method, unless the entire cystic membrane could be reached by the caustic, or cautery, would certainly prevent a recurrence of the tumor. It would, evidently, have been hazardous to vision to have penetrated the orbit to the proximity of the optic nerve, with either of the mentioned caustics, which would have been requisite to success in the case I have just reported.

The analysis of the seventy-three cases, collected and reported by Berlin, quoted by Cornwall as an addendum to the report of his case, published in Vol. XI of the *Archives*, shows the important fact that orbital tumors of this class occur more frequently under 20 years of age, and that a large proportion of them are congenital. If we adopt the invagination theory we must regard all dermoid cysts as having the germ of development at birth.

I regard, as one of the most valuable points for oculists in connection with orbital cystic tumors, to be reliable data from which to estimate the frequency of recurrence under the different methods of treatment. This would be a fruitful field for the investigation of some of the ambitious and younger members of our specialty.

## AN INTRODUCTION TO THE STUDY OF PNEUMONIC FEVER.

BY EDWARD F. WELLS, M.D.

SECOND PAPER.—EPIDEMICS.

Pneumonic fever sometimes prevails as an epidemic, and, when wide-spread and very fatal, it naturally attracts the attention of the medical historian. Accounts of such outbreaks come to us from very remote times, although there must always remain a doubt whether the great epidemics of which we read were really pneumonic in their nature.<sup>1</sup>

Thus the Plague of Athens, which, after devastating Æthiopia and the Mediterranean countries, destroyed more than one-fourth of the inhabitants of the Grecian metropolis,<sup>2</sup> has been considered a form of this disease,<sup>3</sup> although the wonderfully graphic account of the epidemic left us by Thucydides<sup>4</sup>—himself a sufferer from the malady and one of the few attacked who recovered—scarcely warrants the conclusion.

The victims were generally attacked "suddenly, while in full health, and without ostensible cause. First they were seized with violent flushings about the head; and redness and turgescence of the eyes; within, the fauces and the tongue became all at once blood-red, and the breath unnatural and foetid. After this came on sneezing and hoarseness; and in a short time the suffering extended down into the chest, with violent cough; and when it settled on the heart it disturbed its action, and produced bilious discharges of all kinds known to medical language, accompanied by great distress. In most cases a dry hiccough came on, causing violent spasms, which sometimes ceased soon, and in other cases lasted a long time. The surface of the body was neither very hot to the touch nor pallid, but rather red, livid, and covered with an eruption of small blisters and sores; while the internal heat was so great, that the patients could not bear upon them the thinnest garment or the finest linen, or to lie in any other way than naked, and had a longing to throw themselves into cold water. Nay, many who were not carefully watched actually did so, into the tanks, urged by an insatiable thirst; and it made no difference what they drank, much or little. They suffered severely from a distressing restlessness and want of sleep throughout. Yet the whole time the disease was at its height, the body was not sensibly emaciated, but held out against all this suffering in a way beyond belief; so that most died about the seventh or ninth day, of inward fever, still retaining considerable strength. Or, if they survived this crisis, when the disease passed into the abdomen, severe ulceration supervening, with profuse diarrhoea, the majority died of this last from sheer exhaustion."

The author goes on to give the sequellæ of the malady, the refusal of birds of prey to touch the unburied dead, the uselessness of preventive and curative treatment, and to state that persons once attacked were proof against subsequent infection.

This strange epidemic was probably an eruptive fever, *sui generis*, with pulmonary symptoms resembling those of pneumonic fever.<sup>5</sup>

<sup>1</sup> Heiss, Inaug. Diss., München, 1857, S. 20, says that the disease is never epidemic, but in this he is clearly in error.

<sup>2</sup> Smith, History of Greece, N. Y., 1855, p. 289.

<sup>3</sup> Sturges, Nat. Hist. Pneumonia, London, 1876, p. 4; Loomis, Pepper's Syst. Med., Phila., 1885, Vol. iii, p. 307.

<sup>4</sup> Opera, Lib. ii, cap. xlix-ii, Collins' Ed., N. Y., 1883, p. 49.

<sup>5</sup> For further information regarding the nature of this terrible epidemic the reader is referred to Pliny, Nat. Hist., Lib. vii, cap. 50; Aristotle, De Mirabilibus, Sec. i; Lucretius, De Rerum Natura, Lib. vi, H. 1234 et H. 1241; Hippocrates, Aphor., Lib. iv, aph. 55, et De



The Black Death of the middle of the fourteenth century, which swept away one-third<sup>6</sup> of the inhabitants of every land which it visited,<sup>7</sup> has also been considered<sup>8</sup> a form of pneumonic fever.<sup>9</sup>

Beginning in the north of Asia, it spread from one end of Europe to the other and sensibly depopulated every State through which it passed.<sup>10</sup>

The marked phenomena of the malady were ardent fever, cough, sanguineous expectoration, foetid breath, epistaxis, diarrhoea and petechiæ. The disease was considered so contagious that to be near those affected was to invite certain death, "so that parents abandoned their infected children and all the ties of kindred were dissolved."<sup>11</sup>

TABLE I.—CHRONOLOGY OF EPIDEMICS.

YEAR.	SEASON.	COUNTRY.	DISTRIBUTION.
1440		Italy <sup>12</sup>	Padua, Venice and other
1521		Italy <sup>14</sup>	Venice [places] <sup>13</sup>
1535	Spring	Italy <sup>15</sup>	Venice
1537		Italy <sup>16</sup>	Brescia, Lombardy
1550		Switzerland <sup>17</sup>	Graubünden
1557	Winter	Europe <sup>18</sup>	France <sup>19</sup> , Belgim <sup>19</sup> , Netherlands <sup>20</sup> and Genoa, <sup>21</sup> Italy, widely distribut'd
1563		Italy <sup>22</sup>	
1564	Winter	Netherlands	
	Spring	Switzerland <sup>2</sup> and German	
1568	Spring	Italy <sup>27</sup>	Mountainous parts of the
1571	Spring	France <sup>23</sup>	Paris [North
1574	Spring	France	Paris and other places <sup>29</sup>
1576	Spring	Germany <sup>30</sup>	Lower Rhine region
1583	Spring	Germany <sup>31</sup>	Western parts <sup>32</sup>
1585	Spring	Bavaria <sup>33</sup>	Ingolstadt & other places
1586	Spring	Italy <sup>34</sup>	Basano and vicinity
1598		France <sup>35</sup>	Paris
1602	Winter, Spring & Summer	Italy	Perona, <sup>36</sup> Imola, <sup>38</sup> Urbino, <sup>38</sup> and many other places <sup>39</sup>
1613	Winter	Italy <sup>40</sup>	Gualda
1624	Spring	Germany	Augsburg <sup>41</sup>
1633	Spring	Italy <sup>42</sup>	Forlì and entire Romagna <sup>43</sup>
1652		Switzerland	Glarus <sup>44</sup>
1655	Spring	Switzerland	Geneva and vicinity <sup>45</sup>
1680	Spring	Germany <sup>46</sup>	Breisgau & Phillips <sup>47</sup>
1694-5	Winter and spring	Switzerland <sup>48</sup>	Very widely distributed
1696	Spring	Italy	Ferrara <sup>49</sup>
1708	Spring	France	Paris <sup>50</sup>
1709	Winter and spring	Europe <sup>51</sup>	Widely distributed thro' out Northern Italy, <sup>52</sup> Western Switzerland <sup>53</sup> and S.-Eastern France <sup>54</sup>
1713	Summer	Italy	Faletto, <sup>55</sup> Turin
1714	Winter and spring	France	Paris <sup>56</sup>
1716	Spring	France	Paris <sup>57</sup>
1719		United States	Hartford, <sup>58</sup> Conn.
1719	Spring	Switzerland	Buchs <sup>59</sup>

TABLE I.—Continued.

YEAR.	SEASON.	COUNTRY.	DISTRIBUTION.
1720	Spring	Hungary <sup>60</sup>	Rome <sup>61</sup>
1720	Spring	Italy	Turin <sup>62</sup>
1721	Spring	Italy	Paris <sup>63</sup>
1728	Spring	France	Paris <sup>63</sup>
1730	Spring	Minorica <sup>64</sup>	Widely distributed
1730	Spring	Italy	Padua <sup>65</sup>
1731	Winter	France	Paris <sup>66</sup>
1734	Spring	Germany	Frankfort-on-the-Main <sup>67</sup>
1734	Fall and winter	Spain	Verga <sup>68</sup>
1735-6	Fall and winter	Spain	Asturia <sup>69</sup>
1736	Winter	Scotland	Fife <sup>70</sup>
1737-8		France	Rouen <sup>71</sup>
1738		Italy	Padua <sup>72</sup>
1739	Spring	France	Pavilly, Normandy, and vicinity <sup>73</sup>
1740-46	Winter and spring	England	Plymouth <sup>74</sup> and South of England
1745	Spring	France	Aigues-Mortes <sup>75</sup>
1745-46	Winter and spring	Minorica <sup>76</sup>	Widely distributed
1748	Spring	France	Languedoc <sup>77</sup>
1749	Winter	United States	Long Island <sup>78</sup>
1751	Winter and spring	France	Nerac, <sup>79</sup> Calan <sup>80</sup> & vic'ty
1751	Winter	Italy	Forlì <sup>81</sup>
1753		France	Montpelier <sup>82</sup>
1754	Spring	France	Paris <sup>83</sup>
1754	Winter	Italy	Padua <sup>84</sup>
1754-55	Winter and spring	Switzerland	Basel <sup>85</sup>
1755		Spain	Lisbon <sup>86</sup> and other parts
1755	Winter and spring	France	Artois <sup>87</sup> and vicinity
1755	Winter and spring	France	Bourbon-Lancy <sup>88</sup>
1755	Winter and spring	France	Belle-Isle-in-the-Sea <sup>89</sup>
1756	Spr. and autumn	France	Aumale <sup>90</sup> and vicinity
1756		France	Widely spread
1757	Spring	France	Paris <sup>92</sup> and vicinity
1757	Spring	Spain	Valenciennes <sup>93</sup>
1757	Spring	France	St. Jean d'Angely <sup>94</sup>
1757		Austria	Vienna <sup>95</sup>
1757	Spring	France	Toulon <sup>96</sup> and vicinity
1757	Winter	Switzerland	Canton Bern <sup>97</sup>
1757	Winter	France	Capitan, <sup>98</sup> Languedoc
1758	Winter	France	Lambese, <sup>99</sup> Provence
1758	Spring	France	Marignac <sup>100</sup>
1758	Spring	France	Lille <sup>101</sup>
1758	Spring	France	Valence <sup>102</sup>
1758	Spring	France	Angenis <sup>103</sup>
1758	Winter and spring	France	Tarascon, <sup>104</sup> Provence
1758	Autumn	France	Vicinity of Lille <sup>105</sup>
1759	Spring and fall	Switzerland	Basel, <sup>106</sup>
1760-61	Winter	United States	Connecticut, <sup>107</sup> widespread
1761		Italy	Brescia <sup>108</sup>
1761	Winter	Italy	Ponte Longo, <sup>109</sup> nr Padua
1762	Winter	Switzerland <sup>110</sup>	Bern and Wallis
1762		England	Chester <sup>111</sup> and other places <sup>112</sup>
1764-65	Winter	Switzerland	Lausanne, <sup>113</sup> Waadt, Bern Solothurn & many other places <sup>114</sup>
1764-65	Winter and spring	France	Castle Sarrazin <sup>115</sup>
1765	Winter and spring	Germany	Clausthal <sup>116</sup>
1765-66	Winter and spring	Switzerland	Waadt <sup>117</sup>
1767	Winter and spring	Germany	Eisenach <sup>118</sup>
1767	Spring	France	Vivarris, <sup>119</sup> Provence, Languedoc, <sup>120</sup> & other parts of the South <sup>121</sup>
1767		Italy	Tanova Val, Piedmont <sup>122</sup>
1767	Spring	Switzerland	Canton Zurich <sup>123</sup>
1768	Spring	France	Languedoc, <sup>124</sup> lower part
1770	Spring	Germany	Hameln <sup>125</sup> and vicinity
1771-72	Winter	France	Verdun <sup>126</sup> and vicinity
1772	Spring	France	Eplechin <sup>127</sup>
1773	Spring	France	Rouen, <sup>128</sup> Castle Jaloux, etc., <sup>129</sup>
1773	Winter and spring	Austria	Vienna <sup>130</sup>
1775	Winter	Italy	St. Miniato <sup>131</sup>
1776	Winter	France	Dieppe, <sup>132</sup> Eplechin, <sup>133</sup> Bernay <sup>134</sup>
1779	Spring	Denmark	Copenhagen harbor <sup>135</sup>
1779	Spring	France	Langon <sup>136</sup>
1780	Spring	Italy	Livorno <sup>137</sup>
1780-81	Winter	Italy	Como, <sup>138</sup> Florence <sup>139</sup>
1782-3-4	Winter	France	Widely extended <sup>140</sup>
1783	Winter	Switzerland	Bern, <sup>141</sup> Waadt <sup>142</sup> and other places
1785	Winter and spring	France	Ansauville <sup>143</sup>
1786	Spring	France	Vitry-le-François <sup>144</sup>
1787	Winter	Italy	Padua <sup>145</sup>
1788	Winter	France	Nayon and vicinity <sup>146</sup>
1788-89	Spring and autumn of both years	France	Poitiers <sup>147</sup>
1791	Autumn	United States	New England States <sup>148</sup>
1792		United States	Southern States <sup>149</sup>
1793-94	Winter	Italy	Pavia <sup>150</sup>
1795		Italy	Lombardy <sup>151</sup>
1795-96	Winter and spring	Italy	Turin and throughout Piedmont <sup>152</sup>

Morb. Vulgar. Lib. ii; Aretæus, Acut. Morb., Lib. ii, cap. iii, Ed. Kühn, S. 38; Galen, Com. Aph. Hippocratii, Ed. Kühn, p. 410. Sprengel, Geschichte d. Medicin; Littre, Œuvres de Hippocrate, T. i, p. 122; Meade, Med. Works, Lond., 1762, p. 239; and others.

<sup>6</sup> Hecker, Der Schwarze Tod in 14 Jahrh., Berlin, 1832, says one-fourth, and Meade, op. cit., p. 244, makes it one-half.

<sup>7</sup> Hume, Hist. England, N. Y., 1854, Vol. ii, p. 237.

<sup>8</sup> Probably erroneous.

<sup>9</sup> Sturges, op. cit., p. 4; Loomis, op. cit., p. 307; Satterthwaite, Phila. Med. News, Jan. 5, 1889, p. 1.

<sup>10</sup> See, for further information, Stow, Survey of London, 1633, p. 17; Barnes, History of Edward III., Cambridge, 1688, p. 437; Guy de Chauliac, Tract. ii, cap. v, p. 113; Villani, Inst. di Matteo, Lib. i, cap. 2; Ludolf, Hist. Æthiop., Lib. i, cap. 13; Mezeray, Hist. de France, T. i, p. 798; Maitland, Hist. London, 1772, Vol. i, p. 128, and Vol. ii, p. 1022; Northouck, Hist. London, 1773, p. 70; and many others.

<sup>11</sup> Ozanam, Hist. Méd. des Mal. Epidem., Paris, 1817-23, T. iv, p. 76; Copland, Med. Dic., N. Y., 1855, Vol. ii, p. 881, and Vol. iii, p. 219; Hecker, De Const. Epidem., ex Mut. Corpor. Humani, Erfurt, 1791; Sturges, op. cit., p. 4; Hirsch, Histor. Geog. Path., Erlangen, 1850-61, Bd. i, S. 195; Guy de Chauliac, op. cit.; Parker, Brit. Antiq., p. 360; Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Leipzig, 1877, Bd. v, S. 30.

TABLE I—Continued.

YEAR.	SEASON.	COUNTRY.	DISTRIBUTION.
1800	Winter and spring	United States	Greenville, N. C. <sup>153</sup>
1801		France	Joigny <sup>154</sup>
1802-3	Winter and spring	Germany	Stollberg, <sup>155</sup> Freiburg <sup>156</sup> and other places
1803	Winter and spring	Austria	Baden, <sup>157</sup> near Vienna
1803	Winter	Germany	Frankenstein <sup>158</sup>
1805	Winter	England	London <sup>159</sup>
1805-6	Winter	France	Tonneins <sup>160</sup>
1806	Spring	France	Canton Monthois <sup>161</sup>
1806	Winter	France	Widespread in south of France <sup>162</sup>
1806	Winter	Switzerland	Uri, Luzerne, Glarus, Unterwald <sup>163</sup>
1806-16		N. America	Very widely distributed <sup>164</sup>
1807	Winter	France	Dept. Var, <sup>165</sup> Besançon <sup>165</sup>
1807		United States	Connecticut <sup>166</sup>
1808		Germany	Oldenburg <sup>167</sup>
1808		France	Clairvaux and vicinity <sup>168</sup>
" -9-10	Winter and spring	United States	South Carolina <sup>169</sup>
1809	Winter and spring	United States	Georgia, <sup>170</sup> N. Carolina <sup>171</sup>
1809		France	Joigny <sup>172</sup>
1810-11	Spring and winter	Holland	Holstein <sup>173</sup>
1811		France	Bresançon and vicinity <sup>174</sup>
1811	Winter	United States	Vermont <sup>175</sup>
1812	Summer	Germany	Lucka <sup>176</sup>
1812		Denmark <sup>177</sup>	Very widely distributed
1812		France	Tounerre <sup>178</sup>
1812		France	Savoy <sup>179</sup>
1812	Spring	United States	L. Island, <sup>180</sup> Dutchess <sup>181</sup> and Westchester <sup>182</sup> counties, N. Y.
1812	Fall and winter	United States	N. England <sup>183</sup> army posts
1812-13	Winter	United States	Maine <sup>184</sup> and all New England <sup>185</sup>
1812-15	Winter	United States	Region of Great Lakes <sup>186</sup>
1812-14	Winter	United States	N. York <sup>187</sup> various parts
1812-16	Winter	United States	Tennessee <sup>188</sup>
1813	Winter	United States	Newcastle, <sup>189</sup> Delaware
1813	Winter	United States	Albany, <sup>190</sup> N. Y.
1814	Spring	United States	New Orleans, <sup>191</sup> La.
1814-15	Winter	United States	Virginia, <sup>192</sup> Kentucky <sup>193</sup>
1815-16		United States	Georgia <sup>194</sup>
1816	Winter and spring	United States	Ohio, <sup>195</sup> Massachusetts <sup>196</sup>
1816	Spring	Italy	Annecy, <sup>197</sup> Savoy
1817-19	Spring	France	Mayenne <sup>198</sup>
1818	Spring	Switzerland	Bern and Obwalden <sup>199</sup>
1819-20	Spring	United States	Virginia, <sup>200</sup> widely distributed
1822	Winter	United States	Georgia and Carolinas <sup>201</sup>
1824	Spring	Sweden	Stockholm <sup>202</sup>
1826	Summer	Sweden	Dannemere <sup>203</sup>
1826	Winter	United States	Maryland, Hartford Co. <sup>204</sup>
1826-27	Winter	France	Trayes <sup>205</sup>
1827-28	Winter	France	Mericourt <sup>206</sup>
1828	Autumn	Italy	Pozzuoli <sup>207</sup>
1829	Winter	Italy	Veltin, <sup>208</sup> Capitanata <sup>209</sup>
1831	Winter	United States	Sommerville, <sup>210</sup> Tenn.
1831-32	Winter	France	Vicinity of Effig <sup>211</sup> and the Rhine
1832-33	Winter	Switzerland	Uri, <sup>212</sup> Wallis, <sup>212</sup> Tessin
1832	Winter	France	Canton d' Aubin, <sup>213</sup> Avey- ron
1832	Winter	Ireland	Dublin <sup>214</sup>
1833		France	Paris <sup>215</sup>
1834	Winter	Switzerland	Arau <sup>216</sup>
1835-36	Winter and spring	Germany	Markthiedenfelf, <sup>217</sup> Homburg
1837		France	Paris <sup>218</sup> and Noyers <sup>219</sup>
1837		United States	New England <sup>220</sup>
1839	Winter	Germany	Halle <sup>221</sup>
1840	Spring	Switzerland	Höngg <sup>222</sup>
1840		France	Nantes <sup>223</sup>
1842-43	Fall and winter	France	Paris, <sup>224</sup> Marsillagues <sup>225</sup>
1843		United States	Indiana and Kentucky <sup>226</sup>
1844	Winter	Switzerland	Richterschiel <sup>227</sup>
1845		United States	Port Republic, Va. <sup>228</sup>
1845		France	Southeastern portion
1847		France	France, <sup>230</sup> Versailles <sup>231</sup>
1847		Norway	Christiana <sup>232</sup>
1847	Winter	France	Paris <sup>233</sup>
1848-49	Winter	Germany	Sommerfeld <sup>234</sup>
1850-51	Winter	United States	Charleston, <sup>235</sup> S. C.
1851-52	Winter	Alaska	Widely distributed <sup>236</sup>
1852-55		England	London <sup>237</sup>
1853	Winter	Ireland <sup>238</sup>	Eastern portion
1854-55	Winter and spring	England	Leicestershire <sup>239</sup>
1856	Winter and spring	United States	Caswell Co., <sup>240</sup> N. C.
1857-58	Winter and spring	United States	Beaver Valley, <sup>241</sup> Pa.
1860		Iceland	Widely distributed <sup>242</sup>
1863		Malta <sup>243</sup>	Ships St. Jean d'Acre and Cressy
1866		Norway	Christiana <sup>244</sup>
1867		N. Brunswick <sup>245</sup>	Soldiers
1870		Alaska	Kodiak <sup>246</sup>
1875		Fiji Islands <sup>247</sup>	

TABLE I—Continued.

YEAR.	REASON.	COUNTRY.	DISTRIBUTION.
1875		United States	Windham, <sup>248</sup> Maine
1876	Spring	United States	Boston <sup>249</sup>
1878		Germany	Moringen <sup>250</sup>
1879	Winter	United States	Boston <sup>251</sup>
1879		Norway	Loberg <sup>252</sup>
1879	Spring	United States	Minster and Loramies, Ohio <sup>253</sup>
1880		India	Dera Gazi Kahn <sup>254</sup>
1880		France	Marseilles <sup>255</sup>
1880	Spring	Germany	Ober Sichte <sup>256</sup>
1880	Spring	United States	Auglaize Co., Ohio <sup>257</sup>
1881	Spring	Alaska <sup>258</sup>	All along the coast
1881	Spring	Germany	Rietnordhausen <sup>259</sup>
1881	Spring	Germany	Becherbach <sup>260</sup>
1881		Germany	Lustnau <sup>261</sup>
1882		Italy	Tregagno <sup>262</sup>
1882		Germany	Erbenheim <sup>263</sup>
1882	Spring	Germany	Amberg Prison <sup>264</sup>
1884	Winter	England	Newcastle-on-Tyne <sup>265</sup>
1874		United States	South Berwick, Me. <sup>266</sup>
1885		England	Dingwall <sup>267</sup>
1885		Russia	St. Petersburg <sup>268</sup>
1885		United States	Suffield, <sup>269</sup> Conn.
1885		United States	Maine, <sup>270</sup> various places
1886		Canada	Toronto <sup>271</sup>
1887		Ireland	Belfast <sup>272</sup>
1887		England	Wyham <sup>273</sup> & Dingwall <sup>274</sup>
1887		United States	Muskingum Valley, O. <sup>275</sup>
1888	Winter	United States	Kingsbridge, N. Y. <sup>276</sup>

- <sup>12</sup> Savanarola, Practica, Tract. vi, cap. x, rub. 13, Venet. 1497.  
<sup>13</sup> The disease was apparently contagious.  
<sup>14</sup> Montanus, Rhasis Enarrat, Basil, 1562.  
<sup>15</sup> Massa, Febr. Pestil., etc., Venet., 1556; Forzio, quoted by Renzi, Storia della med. in Italia, Neapoli, 1845, iii, p. 551.  
<sup>16</sup> Mundella, Epist. Med., Basil, 1538, Ep. 16.  
<sup>17</sup> Guggenbühl, Der Alpenstich, etc., Zurich, 1838.  
<sup>18</sup> The symptoms of this epidemic were violent cough, dyspnoea, bloody expectoration on the third day and death in about a week.  
<sup>19</sup> Sturges, Nat. Hist. Pneumonia, London, 1876, p. 5.  
<sup>20</sup> Dodonæus, Med. Obsv., Colon, 1581, p. 62.  
<sup>21</sup> Paschetti, De distillatione, etc., Venet., 1615.  
<sup>22</sup> Coiter, Ober. in Bonet. Sepulchret, iii, p. 191.  
<sup>23</sup> Dodonæus, op. cit., ad. ann., 1557.  
<sup>24</sup> Dunus, Epist. Med., Figuri, 1592; Gessner, Epist. Med., Figuri, 1577; Guggenbühl, op. cit.; Meyer-Ahrens, Schweiz. Zeitschr. f. Med., 1845, S. 52.  
<sup>25</sup> Schorndorf, quoted by Gessner, op. cit.  
<sup>26</sup> Wier, Obsv., Lib. i, Amstelod., 1660, p. 910.  
<sup>27</sup> Cardanus, Paralipomen, Lib. vii, cap. 8.  
<sup>28</sup> Baillou, Epidem., Lib. i, Geneva, 1762.  
<sup>29</sup> Hirsch, Hist. Geog. Path., Erlangen, 1862, Bd. ii, S. 40.  
<sup>30</sup> Wier, op. cit., p. 913.  
<sup>31</sup> Lebenwaldt, Hauss-Arzenb., Nürnberg, 1695, S. 20.  
<sup>32</sup> Malady considered contagious.  
<sup>33</sup> Oethacus, Quoted by Schenck, Obsv. Frankf., 1665, p. 777.  
<sup>34</sup> Prosper Alpinus, De Prasagienda Vita, Lugd., 1733, p. 51.  
<sup>35</sup> Fontanus, Med. Prac., Lib. ii, cap. 3.  
<sup>36</sup> Chiochi, Comment. Feb. Moris, etc., Venet., 1604.  
<sup>37</sup> Codronchi, De Morb. qui Imole vagati sunt, etc., Bon., 1603.  
<sup>38</sup> Colle, Cosmor Med., Lib. iii; Fonte, Consult. Med., Frankf., 1609, p. 20; Chomel, Pneumonie, Leipzig, 1841, S. 244.  
<sup>39</sup> Pericarditis was a common complication, the pericardial sac being found full of foetid fluid.  
<sup>40</sup> Tosius, De anthrace tract., etc., Venet., 1618.  
<sup>41</sup> Hochatätter, Rar. Obsv. Med., Frankf., 1674, p. 89.  
<sup>42</sup> Baronius, De Pleuropneumonia, Lib. ii, Farolivi, 1638.  
<sup>43</sup> The disease was complicated by angina and was considered contagious. See Chomel, op. cit., S. 245.  
<sup>44</sup> Guggenbühl, op. cit., S. 14.  
<sup>45</sup> Hirsch, op. cit., S. 32; Guggenbühl, op. cit., S. 15.  
<sup>46</sup> Vorster, Exper. de Pleuropneum. Epidem., Basil, 1689; Brunner, De Pleuropneum. Epidem., Heidelberg, 1689; Ozanam, Hist. Med. des Mal. Epidem., Paris, 1817-23, T. iv; Chomel, op. cit., S. 245; Sturges, op. cit., p. 6.  
<sup>47</sup> The characteristics of the epidemic were pain in the side, oppression, cough, delirium, convulsions and colliquative diarrhoea. The disease was very fatal and was considered contagious. On post-mortem section the lungs were found acutely inflamed, solidified, purulent and gangrenous. The pleura and pericardium were filled with bloody serum and there were "polypi" in the right chambers of the heart. From this last circumstance and the great fatality of the malady, it was called "maligna polypasa." I am acquainted with this should have been noticed in other outbreaks. See Manlius, Lancet, N. Y., 1883, vol. i, p. 479.  
<sup>48</sup> Guggenbühl, op. cit., S. 15.  
<sup>49</sup> Lanzoni, Opp., Lausann., 1738, ii, p. 449; Simon, Epidem. 170 Siècle, Paris, 1859.  
<sup>50</sup> Jour de Méd., T. xviii, p. 177.  
<sup>51</sup> The disease was very fatal and was considered contagious. Jaundice was a prominent symptom. At the beginning the case



- 173 Esmarch, Inaug. Diss., Kiliae, 1821; Hirsch, op. cit., S. 44;  
Friedlieb, Hamb. Mag. d. Heilk., Bd. xv, S. 16.  
174 Barry, op. cit., p. 104.  
175 Eight, Am. Med. and Phil. Reg., Vol. iv, p. 38; Smith, Am.  
Med. and Phil. Reg., Vol. iii, p. 152.  
176 Königsdörffer, Med. Ann. d. Heilk., 1812, S. 1019.  
177 Friedlieb, op. cit.  
178 Chamsern, quoted by Chomel, op. cit., S. 246.  
179 Carron, quoted by Chomel, loc. cit.  
180 Mott, Am. Med. and Phil. Reg., Vol. iii, p. 165.  
181 Sherill, Diseases of Dutchess Co., N. Y., 1817, p. 143.  
182 Smith, Am. Med. and Phil. Reg., Vol. iii, p. 152.  
183 Whitbridge, Trans. Phys. Med. Soc., N. Y., Vol. i.  
184 Hazeltine, N. Y. Med. Repos., Vol. iii, No. 1; Vaughan, Ibid.,  
Vol. iii, No. 1.  
185 New England Jour. Med., Vol. ii, p. 241; Gallup, op. cit.;  
Mann, Med. Sketches, Dedham, 1816; Comstock, N. Y. Med. Repos.,  
Vol. iii, No. 1; Jackson, Letters to a Young Physician, Boston, 1861.  
186 Ludlow, Lake Fever, etc., 1823. Drake, Dis. Int. Valley N. A.,  
second series, Phila., 1854, p. 364.  
187 Bascom, N. Y. Med. Repos., Vol. iii, No. 1; Eight, op. cit., p.  
37; Utley, N. Y. Med. Repos., Vol. ii, No. 2; Mann, Am. Med. and  
Phil. Reg., Vol. iii, p. 497; Willoughby, U. S. Med. Jour., Vol. ii, p.  
136; Low, Am. Med. Phil. Reg., Vol. iv, p. 20; Report of the Sarato-  
ga Committee, Waterford, 1813; Stearns, Am. Med. and Phil. Reg.,  
Vol. iii, p. 504; Hossack, Med. Essays, etc., N. Y., 1824, Vol. ii, p. 419.  
188 Kercheval, N. Y. Med. Repos., Vol. ii, No. 3; Kerr, Ibid., Vol.  
iii, No. 3; McCall, Am. Med. Rec., Vol. vi, p. 585.  
189 N. Y. Med. Repos., Vol. v, No. 2.  
190 Low, op. cit., p. 37. "No class of persons are exempt from it,  
it attacks equally the opulent and the indigent, the temperate and  
intemperate, but proves much more fatal to the poor and intem-  
perate, frequently from the want of necessities to the one and the  
exhausted constitution of the other."  
191 Heustis, Phys. Obsv., N. Y., 1817.  
192 Hereford and Scott, N. Y. Med. Repos., Vol. iii, No. 2; Murphy,  
Phil. Jour. Med. and Phys. Sci., Nov., 1881.  
193 McCall, op. cit., p. 585.  
194 Davis, N. Y. Med. Repos., Vol. iii.  
195 Hildreth, Am. Jour. Med. Sci., Feb., 1830, p. 328.  
196 New England Jour. Med., Vol. v, p. 317.  
197 Carron, Jour. de Méd., T. lxxi, p. 221.  
198 Lemereier, quoted by Fodere, Leçons, T. ii, p. 513.  
199 Guggenbühl, op. cit., S. 51 und 120.  
200 Lucas, Am. Med. Rec., Vol. v, p. 517.  
201 Tidymann, Phil. Jour. Med. and Phys. Sci., August, 1826.  
202 Ekelund, Sv. Läk. Sällsk., Handl. xi, 221.  
203 Bäckström, Sv. Läk. Sällsk., Arbeten för 1826.  
204 Allen, Maryland Med. Rec., Vol. i, p. 589.  
205 Pigeotte, Rev. Méd., May, 1828, p. 157.  
206 Mergaut, Bull. des Sci. Méd., T. xix, p. 384.  
207 Quadri, Obsv. Med. di Napoli, March, 1829.  
208 Massara, Ann. Univ., May and June, 1833.  
209 Alessandro, Arch. di Med. Chir. di Napoli, 1830.  
210 Higginson, Transylv. Jour. Med., Vol. viii, No. 1.  
211 Mistler, Gaz. Méd. de Paris, 1832, p. 597.  
212 Guggenbühl, op. cit., S. 54 und 125.  
213 Grifoulière, Gaz. Méd. de Paris, 1833, No. 54-56.  
214 Hudson, Dublin Jour. Med. Sci., Vol. vii, p. 372.  
215 Landau, Arch. Gen. de Méd., T. xiii.  
216 Zschokke, Pommer's Zeitschr. f. Heilk., Bd. vi, S. 365.  
217 Hergenröther, Correspondenz. Bayr. Aerzte, 1840, S. 61.  
218 Nonat, Arch. Gen. de Méd., 1837, p. 16.  
219 Torchet, Mému. Acad. Imp., 1838.  
220 Lee, Copland's Med. Dic., Vol. ii, p. 888.  
221 Bertram, De Pneumon. Typhos., Halle, 1843.  
222 Zweifel, Pommer's Zeitschr. f. Heilk., Bd. vi, S. 365.  
223 Laveran, Gaz. Hebdom., 1865, No. 35.  
224 Lasserre, Arch. Gen. de Méd., 1842, p. 130.  
225 Gaz. Méd. de Belge., 1843, p. 174.  
226 Sutton, Western Lancet, Nov., 1843.  
227 Schmid, Schweiz Zeitschr. f. Med., 1845, S. 221.  
228 Kemper, Phila. Med. World, 1888, p. 260.  
229 Mourgue, Jour. de Méd. de Bordeaux, 1848.  
230 Laveran, Gaz. Hebdom., 1865, No. 35.  
231 Masselot, Gaz. des Hôp., 1849, Nos. 21, 25 et 30.  
232 Dahl, Norsk. Mag. f. Lægev., xxii, Hft. 6; Virchow's Jahresb.,  
1868, Hft. 5, S. 95; Caton, London Lancet, 1884, Vol. ii, p. 135.  
233 Hirsch, op. cit., S. 45.  
234 Ulrich, Deutsche Klinik, 1851, No. 25, S. 263.  
235 Charleston Med. Jour., Vol. v, p. 824.  
236 Rosse, Cruise of the Corwin, Wash., 1884, p. 17.  
237 Bennett, Med. Times and Gaz., Oct. 23, 1853.  
238 Stokes, Med. Times and Gaz., May 26, 1855.  
239 Barclay, Ass. Med. Jour., June, 1856.  
240 Brown, Am. Jour. Med. Sci., Oct., 1858, p. 330.  
241 Dutcher, Cincinnati Lancet and Observer, Jan., 1861, p. 10.  
242 Hjaltekin, Edinb. Med. Jour., April, 1864.  
243 Bryson, Lancet, N. Y., 1881, Vol. i, p. 198.  
244 Caton, op. cit., p. 135; Dahl, op. cit., S. 95.  
245 Welsh, Brit. Army Rpts., 1867, p. 329.  
246 Rosse, op. cit., p. 16; Pacific Med. and Surg. Jour., 1870, Vol.  
iv, p. 337.  
247 Corney, Lancet, 1884, Vol. i, p. 410.  
248 Dunn, First Rpt. Me. Bd. of Health, 1885, p. 259.  
249 Curtis, Boston Med. and Surg. Jour., May 11, 1876.  
250 Kühn, Archiv. f. Klin. Med., Bd. xxi, Hft. 4; Lancet, August  
24, 1878.  
251 Boston Med. and Surg. Jour., Jan. 23, 1879, p. 131, and Feb. 20,  
p. 274. Very fatal; typhoid symptoms; little or no cough.  
252 Am. Jour. Med. Sci., Jan., 1883, p. 262.

We see from the preceding table<sup>277</sup> that epi-  
demics of pneumonic fever have appeared in all  
parts of the world, although the elevated regions<sup>278</sup>  
of northern Italy, south-eastern France and  
Switzerland have been their favorite haunt.

TABLE II.—SHOWING DISTRIBUTION OF EPIDEMICS.

COUNTRY.	NO.	COUNTRY.	NO.	COUNTRY.	NO.
France . . . . .	67	Ireland . . . . .	3	North America . .	1
Italy . . . . .	34	Denmark . . . . .	2	Iceland . . . . .	1
United States . . .	33	Sweden . . . . .	2	Malta . . . . .	1
Germany . . . . .	24	Alaska . . . . .	2	New Brunswick . .	1
Switzerland . . . .	18	Austria . . . . .	3	Fiji Islands . . . .	1
England . . . . .	10	Minorica . . . . .	2	India . . . . .	1
Spain . . . . .	4	Europe . . . . .	2	Russia . . . . .	1
Netherlands . . . .	3	Hungary . . . . .	1	Canada . . . . .	1
Norway . . . . .	3	Scotland . . . . .	1		
				Total . . . . .	222

Winter and spring have furnished<sup>279</sup> the great  
majority of epidemics, although they have occa-  
sionally appeared in autumn and, rarely, in sum-  
mer.

One of the curiosities of epidemic pneumonic  
fever is that it sometimes singles out certain classes  
of the population for its victims. Thus, the epi-

<sup>253</sup> In the spring of 1879 cases of pneumonic fever were very fre-  
quent in this vicinity. In one house I observed five cases, the pa-  
tients being consecutively attacked within ten days. All were very  
ill and one died. The residence was upon a hill-side, facing east  
and sloping to a river a few hundred feet distant. The drainage  
and hygienic surroundings were unexceptionable. In another fam-  
ily of six persons five were attacked, all recovering. This residence  
was also in a good hygienic condition.

<sup>254</sup> Costello, Lancet, N. Y., 1881, Vol. i, p. 319.  
<sup>255</sup> Gibbs, U. S. Naval Rpts., 1881, p. 410.  
<sup>256</sup> Münnich, Deutsche Med. Wochenschr., 1882, No. 11; Holwede,  
Arch. f. Kinderheilk., Bd. ii, Hft. 1 und 2.

<sup>257</sup> Author. A great number of cases, confined to circumscribed  
localities.

<sup>258</sup> Rosse, op. cit., p. 17.  
<sup>259</sup> Penkert, Berliner Klin. Wochenschr., No. 40-41, Bd. xviii.  
<sup>260</sup> Von Butry, Deutsche Arch. f. Klin. Med., Bd. xxix, p. 193.  
<sup>261</sup> Caton, Lancet, 1884, Vol. ii, p. 135.  
<sup>262</sup> Massalongo, Lo Sperimentale, 1885; Cincinnati Lancet and  
Clinic, Nov. 3, 1883, p. 398; Deutsche Med. Zeitung, No. 41, 1882.  
The village of Tregagno contains about 2000 inhabitants, and is sit-  
uate in a narrow windy valley, but the people were strong and  
healthy and had suffered from no previous epidemic disease. One  
hundred were attacked, with a mortality of 30 per cent. Males  
succumbed in greater proportion than females, although attacked  
equally. At the beginning children were principally attacked, but  
as the epidemic advanced the middle aged, and, finally, elder per-  
sons were also stricken. When the disease entered a house the  
victims were successively attacked. There were usually prodrom-  
ata, and the symptoms were typhoidal from the first. In some  
cases the disease was not localized until several days had elapsed,  
and in others it could not be discovered during life. The apices of  
both lungs were generally affected. The liver and spleen were  
congested and enlarged. The urine was increased in quantity and  
albuminous. The duration was from seven to nine days. Micro-  
organisms, supposed to be the cause of the disease, were found  
when sought for.

<sup>263</sup> Senft, Berliner Klin. Wochenschr., 1883, No. 28.  
<sup>264</sup> Kerschensteiner, Bair. ärztl. Intell. Bl., Bd. xxviii, No. 20;  
American Journal Medical Sciences, January, 1883, p. 262; Em-  
merich, Sanitary News, Nov. 12, 1887. In this prison epidemics  
persistently recurred, and Friedlander's pneumococcus in enor-  
mous numbers were found in the dumping material from the in-  
fected rooms. Splenic enlargement was a marked feature of the  
cases.

<sup>265</sup> Armstrong, Lancet, 1884, Vol. i, p. 127.  
<sup>266</sup> Sleeper, Rpt. Me. Bd. Health, 1885, p. 242.  
<sup>267</sup> Bruce, Brit. Med. Jour., 1886.  
<sup>268</sup> Triwus, Vratsh, 1885.  
<sup>269</sup> Mason, Rpt. Conn. Bd. Health, 1885, p. 338.  
<sup>270</sup> Smith, Rpt. Me. Bd. Health, 1885, p. 257; Sewall, Ibid., p. 202;  
Hurd, Ibid., p. 191.

<sup>271</sup> Geike, Trans. Int. Med. Cong., Washington, 1887; N. Y. Med.  
Rec., Sept. 10, 1887, p. 294.

<sup>272</sup> Lancet, 1887, Vol. ii, p. 1146.  
<sup>273</sup> Foulis, Brit. Med. Jour., 1887.

<sup>274</sup> Adams, Ibid., 1887.  
<sup>275</sup> Bell, Kansas City Med. Index, 1887.

<sup>276</sup> Darlington, N. Y. Med. Rec., Dec. 8, 1888.  
<sup>277</sup> No attempt has been made to render this table complete.

<sup>278</sup> See Lombard, Climat. de Montagnes, p. 70.

demic of Ober-Sichte was remarkable in that the malady was confined to children. From March 20 to April 2, fifteen children, ranging in age from 1 to 5 years, out of a population of 50 children, were attacked with pneumonic fever. For a long time previously and subsequently there were no cases of the disease in the vicinity.<sup>20</sup>

The Alaska epidemic of 1881 was confined almost exclusively to the native population. At Ounalaska the only sufferer, not a native, was from the island of Mauritius. The same peculiarity was noted at St. Paul's, Unza, Kodiak, Cook's Inlet, Prince William's Sound and other villages.<sup>21</sup>

A vast and imposing array of alleged causes for these outbreaks have been enumerated by authors, but the majority of these will not withstand the test of honest criticism. They have been attributed to geological, meteorological and social conditions; to peculiarities of residence, soil and drinking-water, food, habits of living, states of the air and of vegetable and animal life; and, finally and always to those omnibuses of indolence and ignorance, "epidemic influences," "infection" and "filth."

In the Rietnordhausen epidemic the following conditions prevailed: The village, of 700 inhabitants, is located upon a hillside in a high and mountainous country. The first cases were school-children, and as the disease spread it attacked principally the families to which the school-children belonged. In all forty-two were attacked, with two deaths—the disease being very mild. Adjoining the school was a cemetery, located upon filled ground, and in which the soil-water stood above the height of the buried dead.<sup>22</sup>

In 1863 epidemic pneumonic fever broke out on board H. M. ships *St. Jean d'Acre* and *Cressy* of the Mediterranean fleet. Of 815 persons on board the former 410 were attacked, and of 720 on board the latter 298 were affected. The disease was considered contagious, and seemed to be communicated to the other inmates of the Malta Hospital by patients sent there from the ships.<sup>23</sup>

Referring to the Alaska epidemic of 1881, Rosse<sup>24</sup> says: "A singular coincidence connected with the outbreak being its appearance at

these places" immediately or soon after the arrival of the first vessel in port. This circumstance so impressed itself upon the native mind as to give rise to a general and strong belief in the importation of the disease."

Epidemic influenza has been followed by a great prevalence of pneumonic fever, as in England in the seventeenth and eighteenth centuries, in France in the early years of the present century, and in New England in 1837.<sup>25</sup>

An intelligent review of all the facts which have, thus far, been presented, affords convincing proof that epidemics of pneumonic fever do not depend upon any of the causes which have been mentioned, although they may favor the operation of the exciting cause. There is, however, nothing mysterious or freakish about epidemic diseases; if they advance rapidly it is because the germ of the malady is abundantly nourished; if their progress is stayed it is because it no longer finds the food upon which it feeds; if the fatality is great the poison is virulent and energetic or the resistance of the victim is slight; and if the outbreak is mild it is because the balance of power lies upon the side of those attacked.

There can be no doubt as to pneumonic fever—epidemic as well as sporadic—everywhere and always being due to the action of a single peculiar and specific morbid material, which, in the case of epidemics, is fed up to a point of intense virulence and may act upon a population less able than usual to withstand its onslaughts.

Many epidemics have impressed upon them peculiarities which serve to distinguish them from all others. These variations may be seen in the character of the subjects attacked, the mode of invasion, progress and symptomatology, the complications and sequelæ, the fatality and morbid anatomy, etc.

In the Irish epidemic of 1854-55 the symptoms and signs of the first stage of the pneumonic inflammation were suddenly developed, continued for a short time only and subsided with singular rapidity. Stealthily, rapidly and unexpectedly was the disease developed, and equally as silently, quickly and mysteriously did it disappear—fitting like a shadow across the path and leaving as little indication of its presence.<sup>27</sup>

In the Morigen epidemic the principal characteristics were diarrhoea, pleuritic effusion, enlargement of the spleen, albuminuria and diffuse nephritis, pericarditis and fatty degeneration of the heart, meningitis and great prostration.<sup>28</sup>

In the epidemic of Deri Gazi Kahn, in which

<sup>20</sup> Ounalaska St. Paul, Unza Kodiak, Cook's Inlet, Prince William's Sound and other coast villages.

<sup>21</sup> See Sydenham op cit Huxham op cit Andral Clin Med, Phila 1843 Laennec op cit Bard, Med and Phil Reg, vol 11 p 409, Copeland Med Dic N Y, 1855 vol 11 p 888, Williamson, op cit Hosack, Med and Phil Reg, vol 11 p 448, Low Med and Phil Reg, vol 11, p 20 Lee, Copeland's Med Dic, vol 11, p 888.

<sup>22</sup> Stokes Med Times and Gaz, May 25, 1855.

<sup>23</sup> Kuhn Arch f Kinderheilk, Bd xxi, Heft 4 See also Lancet, Aug 24 1875.

<sup>24</sup> For further information concerning epidemic pneumonic fever the reader is referred to Milliken's *History of Epidemics*, p 182, p 578 Geike, Tr

<sup>25</sup> *Journal de Medecine* 1759 Lebert Berlin, Moore N Y Med Record, Lancet, 1857 vol 11 p 247, Path u Therap, Bd 11 S 26 et seq, G Path, Bd 11 S 26 et seq, G Fox Reynolds Syst Med, Hist Pneumonia London, 1840 Spec Path u Therap, 1840 Jour Am Med Assoc, July 2, 1887, p 3 Grissold, Traité de la Pneumonie, 1841, p 130 Laennec Diseases Chest N Y 1830 p 225 Chomel Pneumonie p 331, Swett Dis Chest p 80 Simon, Traité der Epidem, Paris 1859, Auenbrugger, Invent Nov etc Vien, 1761.

<sup>26</sup> *Wochenschr*, November 11, 1882 Hol 11 Heft 1 und 2.

<sup>27</sup> Penkert Berliner Klin Wochenschr, October 3 und 10, 1881.

<sup>28</sup> Bryson, Lancet, N Y, 1881, vol 1, p 198.

<sup>29</sup> Cruise of the Corwin, p 16.

40 persons out of 550 lost their lives in a few weeks, the local morbid processes proceeded with the utmost rapidity through all the stages of inflammation to suppuration, abscess and gangrene. Both lungs were usually affected, and after death were found to be, to a great extent, completely disorganized. The pleuræ were generally implicated, being covered rather thickly with lymph and their cavities filled with a dirty sanguinolent fluid. The blood was dark and thin. From the first there was profound prostration, the teeth were covered with sordes and there were catching pains in both sides.<sup>290</sup>

In the Canton Aubin epidemic the disease was distinctly remittent in character. The local pulmonary affection appeared to be a part of a general disease, which would suddenly attack or vacate any organ of the body. Intermittent and remittent fevers prevailed in the locality.<sup>291</sup>

Periodicity was also a marked feature of the Charleston epidemic of 1851-52.<sup>291</sup>

In the Alaska epidemic of 1881 the disease was marked by great dyspnoea, imperfect aëration of the blood, insomnia and profound physical and mental depression—indeed the latter was such that it seemed impossible to impart the least ray of hope to a patient who had made up his mind to die from the onset of the attack. The malady pursued a very rapid course and was extremely fatal.<sup>292</sup>

In the Rouen epidemic the lungs and stomach were often found gangrenous, the tongue dry and black, the face pale and the abdomen tympanitic. Almost all the patients had a very foetid diarrhoea. A purple eruption covered the surface of the body. The disease was considered contagious.<sup>293</sup>

Purpura and helminthiasis were prominent symptoms of the Provence and Languedoc epidemics of 1767.<sup>294</sup>

Scurvy complicated the epidemic pneumonic fever which prevailed in Nantes in 1840. The disease was of a typhoid type, with extensive implication of the pleuræ.<sup>295</sup>

In the epidemic described by Bennett<sup>296</sup> the disease was characterized by extensive pleuro-pulmonary inflammation, abundant effusion into the pleural sac, with but slight consolidation of the lung. The inflammation was sometimes confined to a single lobe, but oftener there was no well defined margin. The expectoration was darker, more sanguinolent and less tenacious than usual. Respiration was but little increased in frequency and dyspnoea was remarkable by its absence.

The mild epidemic which visited Boston, in

1876, was characterized by a slow, insidious invasion, a prolonged and typhoid course and frequent hæmorrhages.<sup>297</sup>

The symptoms offer an infinite variety. There may be prodromata, with an insidious and prolonged invasion, or it may appear in the ordinary manner, or the access may be remarkable for its suddenness and impetuosity.

There may be an initiatory chill of greater or less intensity and duration, although this is lacking in many epidemics. The temperature curve may follow a higher or lower plane than ordinarily, or it may be very irregular in its course. The pulse may beat with great force and rapidity, or it may be weak, or it may be even slower and of greater volume and force than in health. Respiration may be very rapid and difficult, or it may be easy, regular and natural. The breath may be unaltered or it may have a hot, foul or a peculiar nauseous sweetish odor. Pain and cough may be present or absent, and when present may show striking peculiarities. Expectoration—not always present—may be hæmorrhagic, muco-purulent, gelatinous, gangrenous or so acrid as to corrode the mucous surfaces with which it comes in contact. Diarrhoea is a rather frequent symptom, and it may be colliquative, dysenteric, gangrenous or foetid. Helminthiasis may be a marked feature. The urine may be excessive, scanty, albuminous or hæmorrhagic. The tongue may be clean and moist, foul and coated, or dark and dry. Sordes are often present. The abdomen may be painful and tympanitic. The mind may be clear or profoundly affected, as with melancholia, apathy, delirium, sopor or coma. Convulsions are not uncommon. Jaundice has been often noticed.

In some outbreaks the type of the disease has been sthenic, and in others asthenic, or it has been in one form and changed to the other. In some the local, and in others the general symptoms were most prominent. In some the local inflammation passed on with the utmost rapidity to the total destruction of tissue, and in others there has been a late localization of the disease or the pulmonary lesion was even unsuspected during life. In some the local affection was of the most transient nature, whilst in others it was very persistent. Sometimes the local disease was quite migratory and erratic in its course and at other times it and the general symptoms as well, was distinctly remittent or intermittent in its progress. Hæmorrhages and various eruptions have been frequently noted. Inflammatory and gangrenous angina, scurvy, abscesses, splenic enlargement, hepatic and nephritic changes, cardiac degeneration, endocarditis, pericarditis with hæmorrhagic or purulent effusion, pleuritis with similar effusions, inflammation and gangrene of the stomach and bowels, meningitis, mental aber-

<sup>290</sup> Costello, *Lancet*, N. Y., 1881, vol. i, p. 319.

<sup>291</sup> Grifoulière, *Gaz. Med.*, 1833, p. 475.

<sup>292</sup> See *Charleston Med. Jour.*, vol. v, p. 824.

<sup>293</sup> Rosse, *op. cit.*

<sup>294</sup> Lepceq de la Cloture, *Obsv. sur les Mal. et Const. Epidem.*, Paris, 1776.

<sup>295</sup> Deider, *Obsv. de Méd.*, T. II; Sauvages, *op. cit.*; Menuret, *Quoted by Chomel, op. cit.*, S. 245.

<sup>296</sup> Laveran, *Gaz. Hebdom.*, 1865, No. 35.

<sup>297</sup> *Med. Times and Gazette*, Oct. 23, 1853.

<sup>297</sup> Curtis, *Boston Med. and Surg. Jour.*, May 11, 1876, p. 556.



rations, etc., have all been frequent epiphenomena in various epidemics

The duration and prognosis will vary so much with the character of the epidemic that no trustworthy generalizations can be made. It can only be said that the malady may be so mild as to be almost insignificant, or it may be so virulent as to constitute a disease of the greatest fatality, rivaling, in this respect, any other.

The lesions found after death have also varied greatly in different epidemics. In some it is the pulmonary tissues which alone, or mainly, bear the brunt of the disease, whilst in others the bronchi or the pleuræ are principally affected, the inflammation of lung substance being of secondary importance. In some the local affection has proceeded with wonderful rapidity to complete consolidation, or even destruction whilst in others this was effected more slowly, and in yet others it never occurred—the morbid action not passing beyond the stage of engorgement and stasis, or, if perchance an attempt at exudation had been made, the inter-alveolar exudate was gelatinous and non-plastic. The limits of the local morbid process may be well defined and lobar, or it may be diffused and with no distinct line of demarcation. The pleura and pericardium are very often affected, with a tendency to early and extensive effusion, which is very likely to become purulent. The blood is sometimes dark, thin and non-coagulable and at others there is a peculiar tendency to the formation of heart clot.

Besides the strictly pulmonary lesions one may meet, as a part of the epidemic, the lesions peculiar to cerebral and spinal diseases, enteric and puerperal fevers, dysentery, erysipelas, rheumatism, scurvy, diphtheria, measles, variola, scarlatina, pertussis, enteritis, duodenitis, hepatic and nephritic diseases, etc.

In some epidemics resolution occurs promptly and completely, whilst in others it does so but slowly, irregularly and incompletely, or there may be a strong tendency for the inflammatory action to pass on to chronicity, abscess or gangrene.

## AN EXTENSIVE BURN WITH SERIOUS COMPLICATION.—RECOVERY.

BY HERBERT C. JONES, M.D.,  
OF WINTER PARK, FLORIDA.

On May 18, 1888, about 3 P.M., I was called to see Mrs. James S., æt. 27, the mother of twins two years old, and then in the eighth month of her second pregnancy. She was of robust constitution, a native of the North of Ireland, three years a resident of the United States, the last year a resident of Florida.

The family were living in an unfinished house, about a mile and a-half from my office. While

engaged in baking bread, the back part of her dress became ignited by the flames from the side-door of the cooking stove, which she had thoughtlessly left open after replenishing the fire. Unconscious of what had taken place, she walked to an open passage, and stood in the breeze until enveloped in flames. Her screams soon brought the only man in the vicinity, who was working a few hundred yards from the house. He attempted to smother the fire with a quilt, but only succeeded in burning his hands, and the quilt. Seizing a pail full of water, standing by, he threw that over her, and by this means extinguished the flames, which had little left to feed upon, having consumed all her clothing except that which covered her breast, and shoulders, and feet.

Upon my arrival I found her enveloped in a sheet, pale and trembling, but conscious. A clammy sweat and fluttering pulse denoted marked shock. The "burnt district" embraced the front and sides of the abdomen, both gluteal regions, almost the entire inner and outer surface of both thighs, one leg to the foot, one hand and arm to the shoulder, and the other to the elbow. The chest and back as far as the middle of the lumbar vertebræ, were not involved, and the face was only slightly burned.

The prognostic problem involved a burn, (though in places superficial,) involving fully one-half the integument—the patient sure to undergo a premature delivery, (foetal movement ceased to be felt soon after the accident,)—the hottest part of a semi-tropical summer just ahead; and an exceptionally hot one it proved. Viewing it from this standpoint my prognosis was unfavorable. Perhaps this view was strengthened by an erroneous impression we of the North have of the character and influence of a Florida summer. Assisted by Dr. M. A. Henkel I dressed the burns with cloths dipped in the orthodox mixture of oil and lime water; super-imposing a thin layer of cotton wadding and a light roller bandage, and gave the patient stimulants and sufficient opiate to lull pain. At the next morning and evening visit catheterization was found necessary. During the day vomiting was quite frequent, and annoying. That this was due to shock, and not to the opiate, was evident from the excellent tolerance of opiates subsequently.

Thirty hours after the burn labor began, and before I reached the house rupture of the membranes occurred. With no untoward symptoms, and no particular difficulty, except such as resulted from the deplorable state of the patient, she was delivered of still-born twins, weighing about four and a-half and five pounds respectively. Anæsthetics were not used for fear of renewing the vomiting, and because, with me, chloroform even in labor, is a remedy to be resorted to *in extremis*.

Briefly to summarize the subsequent treatment:

the dressings were removed as infrequently as a due regard to cleanliness and antiseptics would permit. The cloths were wrung out of an antiseptic solution before being saturated with the "carron oil." The principal difficulties were encountered in dressing the gluteal region, and the abdomen, which was the most deeply burned, and the last part to heal. A water-cushion was placed under the hips, and afforded great relief. Deodorized tincture of opium in syrup of chloral was used for pain and insomnia. Quinine was given regularly, and in small doses for a few weeks. The bowels were relieved, when necessary, with salines. The blisters were emptied by needle punctures, and sloughs, and dead epidermis removed as soon as separation occurred, or it could be done without irritation.

After a few weeks the patient was allowed to sit in a reclining chair, and at the end of three months she was dismissed well, except for a small abdominal sore, which has since healed. All disfigurement, save a slight scarring of the hands, is concealed by her clothing; and she is to-day apparently as strong as ever. Whether the cicatrized abdominal walls would again endure the distention of pregnancy is a question of the future. Such an occurrence I should view with some apprehension.

Winter Park, Florida, Jan. 22, 1889.

## MEDICAL PROGRESS.

**TREATMENT OF DIPHTHERIA.**—HOYER (*Memorabilien*, 1888, 129) defines his views on the nature of diphtheria and describes his method of treating it. Considering it to be a disease produced by a microorganism invading a tonsil whose epithelium is lost, he devotes his attention to the prevention of this invasion, or to the destruction of the bacteria which have already attacked the tonsil. For this purpose he paints the tonsils with a solution of thirty parts of gallic acid, sixty parts of distilled water and ten parts of glycerine. A brush of fine bristles is employed and considerable pressure exercised against the diphtheritic membrane. He carries out this procedure three times in succession, repeats it ever six or eight hours, and continues the treatment until the diphtheritic membrane has disappeared. He prescribes also a gargle of one part of chlorine water and three parts of distilled water to be used several times between the applications to the throat. The same mixture is to be injected into the nose in cases of malignant diphtheria. Persons who are in attendance upon patients with the disease should also use a gargle of the same nature. The author declares that he cannot say sufficient in praise of gallic acid for

the purpose indicated. It renders the putrefactive bacteria innocuous, hinders their growth and increase, by its astringent action on the tonsils protects against their absorption, and by the same action loosens the deposition upon them. It is also entirely uninjurious to the patients.

*The Constant Blue-Gum Steam Treatment.*—J. MURRAY-GIBBES (*Australian Med. Jour.*, Oct. 15, 1888) writes again in favor of the use of eucalyptus in diphtheria, having recommended it a year ago. By giving the vapor of the oil with steam we not only gain the beneficial effects of the latter, but obtain an antiseptic action also. He keeps his patient under a tent-like covering in a warm, moist atmosphere containing a volatile oil, obtained by placing leaves of the eucalyptus in a jug of boiling water. In this atmosphere the patient remains as long as there is any inflammation of the throat. Since 1881 he has treated 163 cases in this way, and with only one death. In the practice of a colleague 305 cases were treated in the same manner, and with only one death. In the section of New Zealand in which he practices blue-gum steam has become a household remedy, on account of the confidence which the people have in it for sore throat, cold, bronchitis, and other chest affections. The author says that the antiseptic steam prevents the decomposition of the membrane in the throat, and the consequent septic absorption. It also prevents the spread of the disease to other members of the family.

*Insufflations of Sugar.*—C. LOREY (*Deutsch. med. Wochenschr.*, No. 46, 944, 1888) highly recommends the treatment of diphtheria by the insufflation of very finely powdered sugar upon the tonsils, pharynx, posterior nares, the entrance to the larynx, and after tracheotomy, through the canula. As a result of careful observation on eighty cases of diphtheria of all forms, and at all ages, he concludes that under this treatment the duration and extent of the diphtheritic deposit, and the danger of general infection can be lessened. The odor of decomposition also disappears, the mucous membrane of the tonsils and pharynx becomes more natural in appearance, and is coated with an abundant mucous secretion, and the false membrane softens and becomes detached. In many cases in which the larynx was involved the insufflation loosened the cough, and the threatening symptoms gradually ceased. The favorable action of sugar on unhealthy granulations has long been recognized. In the pharynx the fine particles of sugar penetrate into the mucous membrane and cause a flow of its secretion toward the surface, loosening the membrane, and perhaps washing away the microorganisms. General treatment is, of course, to be employed also, and for this purpose the author prefers apomorphia, and later an easily digested iron preparation.

*Acetic Acid in Diphtheria.*—F. ENGLEMAN (Deutsch. med. Wochenschr., No. 46, 945, 1888) made extended bacteriological studies on many of the different substances usually employed as local applications in diphtheria, in order to determine their power to prevent the growth of micro-organisms. After detailing somewhat the nature of his experiments, he concludes:

1. Diphtheria must be treated on the same principles which are generally accepted as applying to analogous processes in surgery and obstetrics.

2. The majority of the substances recommended for local application in diphtheria deserve no confidence, since they do not exercise sufficient antiseptic power.

3. Almost only those act with certainty which in sufficient concentration have proved themselves of value in surgery also. Like these acts the hitherto little esteemed acetic acid.

4. Most of the powerful antiseptics are ill-suited for use in diphtheria, on account of their local or general poisonous action.

5. Acetic acid appears especially to be recommended on account of its certain antiseptic action, its harmlessness, and the slight irritation which it produces. It possesses also in high degree the power of penetrating animal tissues.—*American Journal of the Medical Sciences*, January, 1889.

VALUE OF OPIUM, MORPHINE, AND CODEINE IN DIABETES MELLITUS.—DR. THOMAS R. FRASER reports one case, out of several detailed observations, in which the results may be stated as follows:

1. The case was one in which mere restriction of diet did not have so marked an effect as occurs in many cases. The prospects of successful treatment were not, therefore, very hopeful.

2. Codeine had a very decided effect in reducing the quantity of urine, sugar, and urea. When contrasted with the reduction produced by restricted dietary alone, the addition of 9 grains of codeine in the day lessened by about one-third, and of 15 grains of codeine in the day by about one-half, the quantity of fluids drunk, and the quantity of urine, sugar and urea, and it slightly reduced the specific gravity of the urine.

3. The addition to 15 grains of codeine of the  $\frac{1}{2}$  grain, and afterwards of the  $\frac{1}{10}$  grain of sulphate of atropine, caused a still further, though not a large, reduction.

4. After the administration of codeine had been stopped, an interval of six days on restricted diet, without any medicinal treatment, was not sufficient for a deterioration to occur to the conditions present before codeine had been given.

5. The subsequent administration of  $\frac{1}{2}$  grain of opium thrice daily produced a considerable reduction. With 1 grain of opium thrice daily the reduction was to less than one-half when con-

trasted with the amounts during a restricted diet alone, and before any medicinal treatment had been adopted. One grain and a half thrice daily produced a further reduction; and when to it was added  $\frac{1}{20}$  of a grain daily of sulphate of atropine, a still further reduction occurred.

6. Restricted diet, with  $\frac{1}{3}$  of a grain of hydrochlorate of morphine thrice daily, or 1 grain daily, also produced a marked reduction; and the conditions relative to the points under investigation were even more satisfactory than when 15 grains daily of codeine were being administered. While this small quantity of morphine was being taken, the fluids drunk by the patient were only one-third, the urine and sugar less than one-half, and the urea about one-half of the amounts during the period of restricted diet alone, before medicinal treatment had been commenced.

As to the general state of the patient during each of these conditions of treatment, restriction to an antidiabetic dietary produced improvement in thirst and mental activity. So long as the quantity of codeine was limited to 6 grains daily, this improvement was maintained; but when 9 grains, and even more, when 15 grains were being taken daily, the appetite failed, she became listless and apathetic, vertigo was occasionally experienced, and the patient remained for a considerable part of each day asleep in bed. The addition of atropine to the codeine did not produce any improvement, but rather added to the discomfort by impairing vision; and even when only  $\frac{1}{20}$  of a grain was being taken thrice daily, the pupils became slightly dilated. When codeine and atropine were stopped, and a restricted dietary alone adopted, the health was not improved. The symptoms referred to became, indeed, worse, and prevented a prolongation of the period of restricted diet without medicine to the extent that seemed desirable before a new plan of treatment was adopted. When opium was now given a marked improvement occurred, but the larger doses caused some drowsiness during the day. With 1 grain daily of hydrochlorate of morphine the condition of the patient became more satisfactory. The drowsiness soon disappeared, the appetite improved, and she became sufficiently active to engage in ward work. Constipation of the bowels was not produced by any of the medicinal agents employed.

A consideration of these averages seems to show that, under a daily administration of 1 grain of hydrochlorate of morphine, the quantity of fluids drunk, and of urine, urea, and sugar voided, was rather less than when 3 grains of opium, and decidedly less than when 15 grains of codeine were being taken. In three other cases in which I have instituted a comparison between these substances in diabetes mellitus, morphine also showed a marked, though not so great, superiority over codeine. After this note had

been prepared, I have seen a recent paper by Dr. Bruce, of London, in which similar results were obtained in two very carefully observed cases. So far as I know, also, the favor with which codeine is regarded in this disease has not been supported by any observations calculated to show its value relatively to opium or morphine so clearly as in the cases to which I have referred. The evidence, therefore, seems to indicate that codeine is a less powerful remedy in diabetes than either opium or morphine, and to confirm the view that in its therapeutic value it ranks as a weak or diluted morphine.

The conclusion receives an importance (no doubt a subsidiary one) from the circumstance that codeine is about three times as expensive a substance as morphine. The great demand for it has led to its being manufactured from morphine so largely, that probably one-fourth of the codeine in the market is an artificial substance. When we consider the large doses that are required in diabetes mellitus, and the general protracted duration of this disease, we are, I think, justified in asking for more clear evidence of its superiority over morphine than has as yet been produced.—*British Medical Journal*, Jan. 19, 1889.

RELATIONSHIP BETWEEN NEURALGIA AND ABORTION.—DR. A. D. LEITH NAPIER, in a consideration of this subject, says:

1. Neuralgia and abortion are frequently associated.

2. In certain cases of "habitual abortion," neuralgia invariably manifests itself as the first symptom, attacking cranial or spinal nerves remote from the uterus.

3. If treatment relieves the pain there is a strong probability that uterine disturbance will not commence, or, if already there have been contractions, these will cease.

4. Neuralgia, while perhaps most common in the rheumatic, occurs in different types of patients: in the anæmic, dyspeptic, or mal-nourished; or in the over-fed, indolent, and plethoric.

5. Foetal death is sometimes the evident cause; sometimes evidently results from the reflex irritation associated with the neuralgic pain.

6. Acute neuralgias occurring in pregnancy may not in any way interrupt healthy gestation.

7. When severe facial, cervical, or other neuralgia yields to treatment, even although the embryo is dead, uterine contractions and emptying will not occur for days, perhaps weeks.

8. The trifacial, occipital, and cervical nerves are most commonly affected; but brachial, intercostal, lumbar and sciatic neuralgias are also met with.

9. Acute gastric irritation is associated with neuralgia and abortion. Pregnancy sickness, although very severe, but seldom causes miscarriage; but gastrodynia, which is sometimes accompanied by salivation and a constant feeling of

nausea and depression, not infrequently precedes acute neuralgia, which eventually causes uterine irritation, and ends in abortion.

The deduction is, that there are two sets of nerve affections in pregnancy: 1, those of simple localized peripheral origin, as neuralgia from dental caries, from vesical, rectal, or pelvic pressure, which seldom go on to cause uterine neuralgia of such degree as will end in contractions sufficient to cause premature expulsion of the embryo; and 2, neuroses, which owe their origin to general conditions of constitutional disturbance, and which may manifest themselves by appearing as acute neuralgia or cranial or spinal nerves.

In the latter class the inhibitory action will sooner or later be gravely affected, and the normal excito-motor conditions will speedily involve the organ upon which physiological action has exercised its paramount influence, that is to say, a patient, suffering, for example, from chronic rheumatism, will be apt to abort not only from chronic rheumatic endometritis, but from the central neural disturbance due to the blood deterioration. Neuralgia occurring in such a case may be facial or intercostal, but speedily becomes uterine, not from peripheral, but from central causes of irritation. A few hours after the commencement of an acute rheumatic neuralgia in the head and neck, sharp ovarian and uterine irritation is experienced; contractions, at first spasmodic, and then regular, sharp, and in muscular waves, accompanied by hæmorrhagic effusions, may very shortly terminate the pregnancy.

I have found that the successful control of neuralgia in pregnancy demands attention to one or two points. If the patient is anæmic, quinine given alone in 10-grain doses twice daily, or, still better, with a grain of opium with each dose, is best as an immediate sedative, and free doses of arsenical solution are most useful as inter-attack treatment. But when the patient is plethoric, especially if there is a gouty or rheumatic tendency, chloride of ammonium, 10 to 15 grains, every two, three, or four hours, with bromides of ammonium or sodium, opium, and aconite, or with veratrum, will answer best. Viburnum prunifolium is of the greatest value in some cases, and certainly ought to be given as soon as the uterine pains are felt. The Liq. Caulophyllum et Pulsatillæ Co. promises to prove valuable as a uterine and ovarian sedative, and might be given either alone, or with viburnum in lessened doses, as soon as acute pain has subsided. Other patients will do well with antipyrin, gr. xv., every two or three hours, or iodides and alkalies; and for some I conceive a course of baths at Kissingen, Kreuznach, Ems, or Wiesbaden, will do more good than any drug. But we must act promptly and dose liberally during the acute attack of neuralgia.—*Edinburgh Medical Journal*, February, 1889.

**FRACTURE OF THE ISCHIUM.**—P. A. SURGEON S. T. ARMSTRONG reports the following case:

Ben Olsen, æt. 38, a native of Norway, was admitted to the U. S. Marine Hospital, New York, on November 14, 1887. He stated that fourteen days previous to his admission to the hospital, while clearing a line on board his vessel, he slipped and fell into the hold, a distance of 10 feet. He struck on the floor beneath, with the right thigh extended and receiving the shock of the impact. He was unable to rise, and after being taken to his bunk the thigh commenced to swell; the mate applied kerosene oil to relieve this condition. By the eighth day after the accident the thigh had returned to its natural dimensions.

When admitted he was examined by Internes W. P. Spratling, who noted that a "thorough examination revealed no fracture of any portion of the femur or pelvis. There seems to be a deep-seated bruise of the gluteal muscles, and there is tenderness on pressure over the knee-joint."

On the 5th this note was made on the history sheet: "Patient can put almost normal amount of weight upon the foot while standing; the tenderness about the hip-joint is disappearing." The diagnosis of contusion of the thigh was made, though I understood that one medical officer who saw the case believed it to be an impacted fracture of the femur. On the 11th, the case having come under my charge, a very thorough examination was made, as the persistence of pain in the right hip seemed scarcely in consonance with a contusion. The usual manipulations of the thigh were made, forced flexion causing pain referred to the region of the head of the femur. Similar pain was caused by rotation outward. The pain was not sharp, as it would have been in case of fracture of the neck of the femur, nor was the foot everted when the patient lay upon his back; so any injury to the femur was excluded. Passing the index finger of the right hand into the rectum and feeling along the ramus of the right ischium, an unevenness was detected. When the thigh was flexed or rotated, motion could be felt at this point; the line of fracture was transverse. The patient was examined by the other officers on duty at the hospital and the diagnosis confirmed.

The patient was put upon his back, with support to the right leg to secure immobility. He was not very intelligent and was wilful, the nurse informing me that he would move whenever possible. In consequence, on the last of December motion was still detected at the site of fracture. He was allowed to sit up and walk with a crutch, as it was believed that the thigh would make extension on the bones and the motion excite the deposit of new bone. January 30 he was returned to bed, and on the 5th of March he was allowed to sit up, as there seemed to be bony union then.

The use of the lower extremity was regained

very slowly, and when he dispensed with his crutches he had a decided limp on account of shortening of the leg. He was discharged from the hospital July 5.

All works on general surgery refer to this fracture as unusual. Gross (*Surgery*, vol. 1, p. 961) states that there may be either shortening or retention of natural length of the lower extremity. In Hamilton's excellent monograph on fractures he refers to the necessity of rectal, or in females of vaginal, examination. The history of this case, it is believed, will show the necessity of making a rectal examination in all cases of injury to the thigh where fracture of the femur is suspected but not present.—*Report of the Marine Hospital Service*, 1888.

**AN INGENIOUS METHOD OF FORMING A SPHINCTER AFTER GASTROSTOMY.**—To avoid the usual unfortunate and almost inevitable leakage from the artificial opening in cases of gastrostomy, GIRARD recommends the following procedure: Through a fifteen-centimeter vertical incision, the left rectus muscle is divided in its upper portion in the median line. The peritoneal cavity is then opened near the middle of the cut, and a wedge-shaped portion of the fundus of the stomach drawn out through the wound. A row of sutures is then introduced so as to include the posterior portion of the sheath of the rectus, the edge of the peritoneum, and the stomach-wall at the base of this protruding portion. These are to fix the stomach in the wound. An incision ten centimeters long and parallel to the original wound is now made on either side of the latter, so that two bundles of muscle-tissue of the size of a finger are formed. These bands are now crossed laterally, and the stomach drawn out through the sphincter-like opening thus made in the interval between them. The muscle-bands and gastric pouch are now fastened in place by sutures, after which the stomach is immediately opened. The author thereby hopes to obtain a sphincteric action upon the stomach-opening which shall be under muscular control, or, should the muscle-structure disappear, that the cicatrix itself, being pulled upon by the rectus, will accomplish the desideratum.

Girard performed this operation recently upon a patient, but as the case died before reacting from operation we cannot yet be sure of its utility.—*Wiener Med. Presse*, No. 25, 1888.

**EXPERIMENTAL IODOFORM POISONING.**—DR. A. V. KORIANDER, of St. Petersburg, has endeavored to throw some light on the vexed question of the suitability of iodoform for use as an antiseptic by poisoning dogs with it, and examining the morbid appearances post mortem. The iodoform was introduced into the peritoneal cavity in quantities varying from 0.3 to 1.5 gram

per kilog. of the animal's weight. The microscopic sections of the organs were stained by hæmatoxylin and lithion-carmin. Nephritis affecting the renal glomeruli was invariably found, and the liver was infiltrated by minute fat granules. These appearances are considered by Dr. Philipovich to be characteristic of iodoform poisoning.—*Lancet*, Jan. 19, 1889.

**ACTION OF ACIDS AND ALKALIES ON DIGESTION.**—These are some of the results of Jaworski's investigations upon the *action of hydrochloric, lactic, and acetic acids on the functional activity of the human stomach*: The mucus is precipitated; an increased biuret action appears, particularly after hydrochloric acid; an influx of bile usually follows large doses of acid; the secretion of pepsin is materially assisted, while that of the hydrochloric acid is but slightly influenced; 200 cubic centimetres of normal acid disappear from the stomach in seventy-five to ninety minutes; and long-continued administration of acids checks the normal secretion of hydrochloric acid. The action of alkalies on the digestive function appears to be to dissolve the mucus and hinder secretion of pepsin, whereas the acids precipitate the mucus and induce pepsin secretion. An increased secretion of hydrochloric acid, however, succeeds the disappearance of alkalies from the stomach. The prolonged use of either acids or alkalies in large quantities may lessen or even stop the secretion of hydrochloric acid; but carbonic acid, both as a gas and when dissolved in water, favors the secretion of both hydrochloric acid and pepsin, and consequently increases the digestive power of the stomach as well as its mechanical activity.

Certain inorganic salts, such as the potassic, sodic, and ammoniac sulphates, and the potassic and sodic phosphates, markedly hinder tryptic digestion, especially the potassic phosphate.

In artificial digestion experiments it was found (Martin and Williams) that the presence of bile acids accelerated the amylolytic action of the pancreatic juice.

In the digestion of fats, bile alone is insufficient, and in rabbits the same has been found to hold good as to the pancreatic juice (Dastre). It would follow, therefore, that the simultaneous action of both juices is essential, bile promoting the absorption of fats, and pancreatic juice being the active agent in their decomposition.

In artificial-digestion experiments it is often very difficult to get clear filtration, owing to the presence of very finely divided matter in suspension. By vigorously shaking the fluid, however, with fibrous asbestos, the subsidence of the solid particles may be greatly assisted.

Ferments capable of converting starch into sugar, and of inverting cane-sugar, have been found in the healthy fæces of children and adults, and their presence probably shows that some action

more important than the mere absorption of water occurs in the large intestine.—*British Medical Journal*, Dec. 29, 1888.

**ACTION OF IRON IN CHLOROSIS.**—Chlorosis is a form of anæmia apparently limited to females about puberty. Iron in this disease causes a great increase in the hæmoglobin, but as Hamburger and others have shown, very little of the iron is absorbed from the alimentary canal, it being taken up solely in the form of organic compounds, such, for example, as are formed in the processes of plant life. Further, that the total iron in the body amounts only to about 3 grams, an amount which is taken many times over during treatment. Possibly, as Bunge suggests, the iron is here of use by removing the excess of sulphur from the body; for in chlorosis due to excessive fermentation processes in the alimentary canal hydric sulphide is generated in large amount, and destroys the organic compounds of iron that go to form hæmoglobin. The presence of iron in the alimentary canal prevents this destruction going on. Landwehr, however, taking into consideration the limitation of chlorosis to the female sex, and to the period of puberty, is inclined to doubt this explanation. He is disposed, on the contrary, to regard the disease as one caused by an excessive development at this period of the substances containing animal gum required for the after nourishment of the embryo, and which acts injuriously on the hæmoglobin molecule. Iron precipitates this animal gum in the alimentary canal, and thus excess of it leaves the body in the fæces.—*British Medical Journal*, Dec. 29, 1888.

**TREPHINING THE MASTOID PROCESS.**—DR. MITZKUNA proposes a new locality for trephining the mastoid process. The ear is drawn forward, whereby a fold (of skin) is formed just behind the ear; under this fold a flat, bony prominence is felt; between this prominence and the base of the mastoid process is a depression, which is the place for trephining. The advantages of this locality are:

1. A chisel can descend from one-fourth to one-third of an inch with safety.
2. The transverse sinus, which takes a different course in different people, never touches this point.
3. The thickness of the temporal bone is greatest at this point.
4. The only drawback of this locality is the possibility of going through the external auditory canal, but this is nothing when compared with the possibility and danger of injuring the transverse sinus.—*Wiener klin. Wochenschrift*, January 17, 1889.



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SATURDAY, FEBRUARY 23, 1889.

THE RELATION OF DRESS TO PELVIC DISEASE.

The questions as to the relations of dress to disease are assuming larger proportions, and taking a more healthy hold upon the minds of laymen; and as laymen become more interested in them, and ask for more knowledge, the more information must medical men have to impart, if they would take the position they should occupy as instructors of the public in preventive medicine. The readers of THE JOURNAL will remember the very interesting address of Dr. D. Hayes Agnew, at the last meeting of the American Surgical Association, on "The Relation of Social Life to Surgical Disease."

The most recent contribution to this subject is a paper read at the last annual meeting of the Michigan State Medical Society, by DR. J. H. KELLOGG, on "Experimental Researches respecting the Relation of Dress to Pelvic Diseases in Women." For many years it has been asserted, though on inaccurate and therefore unreliable data, that the modes of dressing in vogue among civilized women constitute an important etiological factor in the production of various forms of pelvic disease peculiar to the sex. Dr. Kellogg now contributes the results of some investigations that he has made; and it may be said that his opportunities for experimentation are excellent. He considers his results under five heads: 1. A comparative study of the function of respiration in civilized and uncivilized women. The means of investigation employed for exact comparison were the pneumograph and the kymographion, or recording cylinder. 2. Studies of the influence of

respiration upon the pelvic organs, as shown by the tracings obtained by means of an inflated air pessary in the vagina connected with a recording tambour and cylinder. 3. Observations upon the influence of constriction of the waist upon intrapelvic pressure as measured by a peculiar form of mercurial dynamometer, to be described in this paper. 4. Observations of the amount of external pressure exerted by a tight corset, tight bands, or other form of constriction of the waist, as recorded by the dynamometer. 5. Direct measurements of the amount of displacement of the uterus produced by constriction of the waist, the measurements being taken with an instrument devised for this purpose.

In regard to respiration in civilized and uncivilized women, it has been held for a long time that there are two distinct types of respiration in human beings, characteristic of the two sexes: abdominal and costal—and physiologists asserted that adult males breathe chiefly with the lower portion of the chest, while women breathe chiefly with the upper part of the chest. Nine years ago Dr. Kellogg wrote: "It is undoubtedly true that most women do breathe almost exclusively with the upper part of the chest; but whether this is a natural peculiarity, or an acquired, unnatural and depraved one, is a question which I am decidedly inclined to answer in harmony with the latter supposition, basing my conclusion upon the following undeniable facts: 1. In childhood, and until about the age of puberty, respiration in the boy and the girl is exactly the same. 2. Although there is a change in the mode of respiration in most females, usually soon after the period of puberty, marked by increased costal respiration and diminished abdominal or deep respiration, this change can be accounted for on other than physiological grounds. 3. I believe the cause of this modification of respiration is the change in dress which is usually made about the time of puberty. The young girl is now becoming a woman, and must acquire the art of lacing, wearing corsets, 'stays,' and sundry other contrivances which will aid in producing a 'fine form.' 4. I have met a number of ladies whose good fortune and good sense had delivered them from the distorting influence of corset-wearing and tight-lacing, and have invariably observed that they are capable of as deep respiration as men, and practice it naturally. I am thoroughly convinced that this so-

called physiological difference between man and woman is really a pathological rather than a physiological difference. In short, I believe that the only reason why women do not, under ordinary circumstances, breathe as do men, is simply that they cannot breathe naturally." Dr. Kellogg's many recent observations tend to confirm the views thus expressed.

Observations made upon Chinese women in San Francisco showed that in them there was nothing of the costal type of respiration; the abdominal breathing was as prominent in them as in males that lead sedentary lives. Observations made among the Yuma Indians showed no differences between the male and female respiration. The same results were obtained among the Chickasaw Indians. The tracing of the respiratory movements of a Scotch woman that had never worn a corset, given in Dr. Kellogg's paper, shows a decidedly abdominal type of respiration.

Physiologists have attributed the supposed female type of respiration to the fact of gestation. But Dr. Kellogg's observations with the pneumograph contradict this view. Respiratory tracings of *normal* women in the pregnant state show that the breathing is abdominal. In short, the whole matter may be thus summarized: "The so-called female or costal type of respiration, which prevails among civilized women, is the result of their restricting and unphysiological mode of dress, and is not due to the influence of gestation."

If it be admitted that the normal respiratory type in the female is the counterpart of that in the male, it must be evident that respiration in the female has an important influence on the pelvic organs. Illustrating this are some interesting tracings, made by means of an air pessary connected with a tambour, the movements being recorded upon a revolving cylinder. The facts of interest elicited by observations of the influence of respiratory movements upon the pelvic viscera are: 1. There is a normal movement of the pelvic viscera corresponding to the movements of respiration. 2. These movements are lessened by the constriction of the waist, inducing the costal type of respiration, as the result of two factors (*a*) the lessened movements of the diaphragm, and (*b*) the downward displacement produced by the pressure of the corset upon the abdominal walls.

By the use of an ingenious instrument of his own construction, Dr. Kellogg shows that con-

striction of the waist has a very marked influence upon intrapelvic pressure. He has found that the average pressure exerted at the waist by a tight corset or tight bands is, in ordinary respiration, about .3 of an inch of mercury. It was found, also, that the movements of the uterus up and down in ordinary breathing are from .1 to .3 of an inch. Coughing or deep breathing, straining, and other similar movements may increase this to .5 inch. By the application of the corset, or other constricting means, the uterus is lowered in the pelvis from .2 to .5 of an inch.

The more one studies humanity in the natural state, the stronger becomes the conviction that woman is not physiologically weak and prone to pelvic disease, and that the chief element in civilization that causes pelvic diseases in the female is the dress of civilized females. The student of zoology cannot admit that the human female alone is normally of a very different type, as regards one of the chief functions of animal life, from the male. And if there is something in our civilization that deforms and predisposes to disease the mothers of our men, the sooner we reform that something, and improve it out of existence, the better for the race.

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#### MORE HOSPITALS THAN MONEY FOR THE SICK.

The last fifty years have been characterized, especially in Great Britain and this country, by a rapid increase in the establishment of voluntary hospitals for the sick and injured, particularly in the leading centres of population. It has been a period of great activity and advancement in all departments of medical science and practice, giving birth to and rapidly multiplying so-called specialties; and each specialty in turn has demanded hospital, infirmary, or dispensary accommodations for its own class of patients. These demands have generally found a sufficient response from the religious and charitably-disposed citizens to cause the building and furnishing of hospital after hospital, and free dispensaries of every grade, but nearly all left for support to the annually recurring demand for increased contributions. The result reached at present is, for the large cities of Great Britain and the United States, an average of about one hospital bed for every five hundred of the population, and free dispensaries

furnishing medicines and medical advice, not only to all the really out-door poor, but also to a very important percentage of those who are perfectly able to pay reasonable fees for such medical services as they need. On the other hand, notwithstanding all the devices for raising money that human ingenuity has been able to invent, including charity balls, church festivals, hospital Sunday collections, mimic theatricals, variety fairs, etc., nearly all these voluntary institutions ostensibly dedicated to the relief of human suffering are found in debt at the close of each financial year.

DR. SUTHERLAND, who has recently written an interesting series of papers concerning the condition of the voluntary hospitals of Great Britain, gives the following statistics concerning the voluntary hospitals of England, Scotland, and Ireland, not including the infirmaries sustained by the poor-law rates. Dublin has one hospital bed to every 140 of the population; Belfast one to 380; Edinburgh one to 410; London one to 420; Birmingham one to 700; Sheffield one to 830; and Leeds one to 1,020. In Glasgow there are 1,057 beds daily occupied in the voluntary hospitals at an annual expense of \$220 per bed, while there are 1,169 beds daily occupied in the hospital supported by the poor-law rates at an annual expense of only \$115 per bed. The annual deficit in the working expenses of the voluntary hospitals of the last-named city is stated at \$45,000. And the *British Medical Journal*, for February 2, 1889, in stating the foregoing facts, adds that, this impecunious state of the voluntary hospitals in London is still worse.

The same evils, though possibly in less degree, exist in this country. If we include the Cook County Hospital with the voluntary hospitals of all classes in this city, we have at least one hospital bed to every 450 of the population. Omitting the County Hospital, there would be in the hospitals dependent largely upon voluntary contributions, one bed to every 600 of our population. And still there are hardly less than half a dozen more hospital projects being urged upon the attention of the community, most of them with more zeal than wisdom. There are questions of great importance relating to the proper management of the poor, and of the sick poor especially, together with the relations of medical men to them, that have occupied much of our attention through a

long professional life; and concerning which we have been deterred from writing only from want of time. But no other questions are more worthy of the attention of the wisest members of every community than these.

#### EXPERIMENTAL DIABETES.

MM. GERMAIN SÉE and E. GLEY have recently made a report on this subject to the Académie des Sciences. Thus far all attempts to produce diabetes in animals have failed—at least such forms of diabetes as are seen in the human subject. It is well known that irritation of the central end of the vagus nerve gives rise to hyperglycæmia and glycosuria. The experimenters have succeeded in producing permanent irritation of the central end of the right pneumogastric in dogs, and several of the animals have presented not only glycosuria, but true azoturia with notable and rapid emaciation. But this is only one of the elements of diabetes. Dogs have been made glycosuric also by being given daily a quantity of phloridzin. After the first day the urine of these dogs contained, for twenty-four hours, from 10 to 12 per cent. of glucose. The glycosuria ceased with the stoppage of the administration of phloridzin. This experiment confirms a similar one made by von Mering. But phloretin, one of the products of the breaking up of phloridzin, causes scarcely 1 per cent. of glucose to appear in the urine. It is evident, then, that phloridzin does not cause glycosuria by its radical phloretin. In whatever way the dogs were fed, under these experiments, the urine still contained sugar. This fact is interesting, since, as all the glycogenic material of an animal to which phloridzin is given is very rapidly destroyed, as von Mering has shown, it is evident that glucose may be formed in the organism at the expense of the albuminoid and fatty matters.

It was observed that an animal under experiment became voracious, and, unless subjected to "forced feeding," emaciated rapidly. From this it would appear that glycosuria accompanies, in a measure, polyphagia. Glycosuric animals were subjected to the various methods of treatment of diabetes. The two methods of treatment by bicarbonate of soda and by arsenic were inefficacious. The administration of bromide of potash caused a slight diminution in the amount of sugar. The most marked diminution of glycosuria was

obtained by the administration of antipyrin. Lépine and Porteret have recently shown that antipyrin retards the transformation into glucose of the glycogen of the liver and muscles. M. Sée has used antipyrin in some cases of diabetes, and obtained very good results. Since the general action of antipyrin is to diminish excitability of the nervous system, may it not be, ask MM. Sée and Gley, that diabetes tends to an exaggeration rather than to a retardation of nutrition.

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#### EDITORIAL NOTES.

THE RUSSIAN MEDICAL CONGRESS, which was opened in St. Petersburg on January 15, and continued seven days, is said to have been a great success. It was held under the Præsidency of Dr. Erisman, Professor of Hygiene at Moscow. The number in attendance was 1500, against 1000 at the second congress, and 500 at the first. The congress was divided into eighteen sections, and a very large number of papers was read. An exhibition, which remained open for three weeks, was a very interesting feature of the congress.

A NEW SOURCE OF COW-POX has been recently discovered by the Vaccine Committee of Milan. The animal was "covered," says a French exchange, with a confluent eruption, and in a few days a cow inoculated from it. The inoculation took well. This is the seventeenth time that the Milan Committee has found a natural source for vaccine virus.

THE FUNCTIONS OF THE BRAIN have been still further studied by GOLTZ. He has destroyed extensive areas of the cerebra of dogs without killing the animals, and in one case a dog lived five months after the whole of the left hemisphere was removed, but showed modifications of character and mental enfeeblement. Goltz advises surgeons to be more bold in cases of cerebral tumors.

"LAVAGE" OF THE BLOOD has been experimented upon by DASTRE and LOVE. Considerable quantities of a physiological saline solution may be injected into the veins of an animal without causing apparent trouble. The quantity used may be as much as two-thirds the weight of the animal (rabbits), but the solution should not be introduced faster than 3 ccm. a minute, and 3

ccm. to the kilogramme of weight of the animal; furthermore, the organs, especially the kidneys, should be healthy. When the solution is introduced too rapidly, and the organs are not healthy, exudations take place into the serous cavities, and there is exophthalmos, suffusions of blood, and exudations into mucous membranes. The urinary secretion bears a constant ratio to the amount of fluid injected, when the kidneys are healthy. The experiments show the existence of a physiological balance between the circulatory and the serous systems. Analyses show that when the animal has returned to the normal condition the injection of a physiological saline solution has had no other effect than that of washing out the blood.

A NEW COLD INDIA-INK INJECTION, described by TAGUCHI, permits examination by transmitted or reflected light. The coloring matter is not altered by light nor by chemical agents; the particles of carbon have no action on the tissues; and the coloring matter adheres to the walls of the vessels, and does not fall out of small sections. The specimens may be hardened in any reagent without change of color. They may be examined in the fresh state in glycerine, or may be colored by any desired reagent. The injecting liquid is prepared by grinding India-ink in water in such manner that a drop placed on blotting paper does not spread.

DR. JOHN C. DALTON, of New York, long known as one of the most eminent teachers and writers in the department of physiology, died at his residence in New York City on the 12th of February, 1889, aged 64 years.

ANTISPASMODIC ACTION OF ANTIPYRIN.—In the January, 1889, number of the *University Magazine* DR. E. T. BRUEN calls attention to the value of antipyrin as an antispasmodic. The drug modifies pain in neuralgia and certain forms of headache. Sonnenberger and others have used it in pertussis, and claim that it greatly reduces the number and severity of the paroxysms, very early in the disease. Dr. Bruen concurs in this opinion. He directs attention also to the efficacy of antipyrin in allaying spasmodic cough in cases of influenza with bronchial catarrh, and in some cases of subacute bronchitis. These cases almost always present, in the interscapular region, the

signs of enlargement of the bronchial glands. This enlargement causes pneumogastric irritation, and thus tends to produce spasmodic cough similar to that of pertussis. Two grains of antipyrin, given every three or four hours to an adult, or twelve or fifteen grains a day, will often modify the paroxysmal cough. The drug may be suspended after two or three days, and again resumed if the symptoms return. The paroxysms of some cases of asthma, and the severity of the symptoms, are reduced by antipyrin, given in 5 grain doses until 25 grains are taken—especially in cases in strong, robust men. In the painful period preceding the menstrual flow, says Dr. Bruen, antipyrin is again a useful drug. A 5 grain dose should be given, and repeated in half an hour. This effect is satisfactory until the system becomes habituated to the drug, when antifebrin may be a useful substitute, in one-half to one-third smaller doses than antipyrin. When administration by the mouth fails, enemata of from 15 to 30 grains of antipyrin may be used during menstruation in cases of dysmenorrhœa. The large dose, 30 grains, has been used by Windelschmid, but Dr. Bruen has not used doses of more than 15 grains.

THE USE OF YEAST in therapeutics, while not new, is recommended for scurvy by HEER, who treated 800 scorbutic patients with it, of whom but two died. The mortality of other scorbutic patients (prisoners), not treated with it, was much greater. Heer attributes to it some action on the fever and the course of the disease. Under its use the temperature fell from  $41^{\circ}$  to  $38^{\circ}$  C. in twelve hours.

## SOCIETY PROCEEDINGS.

Philadelphia County Medical Society.

*Stated Meeting, December 12, 1888.*

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. JOHN H. PACKARD read a paper on  
NOTES OF A SUCCESSFUL CASE OF LAPAROTOMY  
FOR INJURY BY A CIRCULAR SAW.

Charles Brown, æt. 12 years, was brought to the Pennsylvania Hospital, September 24, 1888, having fallen against a circular saw in rapid mo-

tion. The accident occurred about one mile from the hospital. On his admission, the ascending colon and about two feet of the small intestine were protruding from a wound four inches or more in length, nearly vertical, on the right side of the belly, some two inches from the middle line. The mass was tightly grasped in the wound, so that access of air to the peritoneal cavity was prevented. The boy was in a condition of marked but not excessive collapse. He was etherized, and the parts antiseptically cleansed. The bowel was then carefully examined. Three wounds of the intestinal wall were detected; one involving the entire thickness, the other two the peritoneal coat only. At several points the omentum had been wounded, and the mesentery was cut in two places. The boy's woollen clothing had been torn by the teeth of the saw, and a great many minute shreds of the stuff deposited on the surface of the protruded mass. The three intestinal wounds were carefully sutured with very fine silk, after the method of Lembert. All the bleeding points were secured with fine carbolized catgut. Some ragged portions of omentum were similarly tied and cut off. Attention was next given to the cleansing of the peritoneal surface from all the bits of woollen threads deposited on it; a very tedious process, occupying more time than any other part of the operation. In order to return the protruded mass it was necessary to enlarge the wound somewhat; after which reduction was accomplished without difficulty. After irrigation of the peritoneal cavity, the edges of the wound were brought together with silkworm-gut sutures, secured by shot. A glass drainage tube with a closed and rounded end was inserted, and the usual antiseptic dressings applied, with a flannel over all. Every two hours the cotton rope filling the tube was removed, and suction was made with a hard-rubber syringe with a long nozzle, so as to prevent any accumulation of secretions. Reaction took place very favorably; the boy had only very slight pain, but some nausea and vomiting. The nausea and vomiting continued all next day, subsiding toward evening. A free movement of the bowels occurred, and I learned later that an attendant, just after the boy's admission, had given him by mistake 10 grains of blue mass, intended for another patient. As soon as the stomach became quiet, the administration of prepared milk and beef-tea, alternately every two hours, was begun.

On the 28th (the fourth day) there was only a slight yellowish discharge from the tube.

29th. The glass tube was removed, and a soft rubber one substituted for it. Solid food (milk toast) was given.

30. He ate an egg and some chicken-broth. A day or two after this the tube was removed, and a few days later the sutures. For some two

weeks after this the boy was kept in bed; he was allowed first to sit up in bed, and then to get up and walk about. On October 31st, thirty-seven days after the injury, he walked into the clinic-room; and on November 12th he was discharged, with directions to wear a binder for some time, and to report to us before dispensing with it.

I should have mentioned that, after the spontaneous movement of the bowels on the second day, an enema of turpentine and sweet oil was administered about every third day until his dismissal.

Certain features of this case may be briefly commented upon. The boy's youth was, of course, in his favor. He was stout and healthy, although his surroundings had not been, by any means, hygienic. But there was one circumstance of special advantage—the fact that the protruded mass quite filled up and plugged the wound in the abdominal wall. Besides this, the wounds were all of small extent, and no large vessels were divided. The presence of the almost innumerable shreds of soiled woollen clothing on the peritoneal surface was of course an element of danger, only to be set aside by the utmost care and patience in their detection and removal.

DR. JOSEPH PRICE: The fact that the protruding intestine completely closed the wound had a great deal to do with the successful result in this case. We know that undue manipulation and prolonged and needless exposure of intestine are frequent causes of shock and death this fact is beautifully illustrated in needlessly prolonged operations. I never could understand the vicious do nothing policy of ambulance surgeons in these cases of abdominal incised wounds. The ambulance surgeon should be prepared and instructed to act promptly in such accidents. Promptitude is everything. A pitcher of warm water and a few threads might save lives that are lost by carrying the patient untreated, with the intestines exposed, covered by filthy clothing to the distant hospital, there to wait for the chief to arrive before anything is done. I recently read of a case of a man who was accidentally eviscerated while hunting alone in the backwoods. Someone found him with the intestines protruding and covered with dirt, and carried him to the nearest brook, washed and sewed him up. He was also fortunate in *being away from opium* and from meddlesome nurses and officious residents of a general hospital, and he recovered. The strictest simplicity, absence of opium and of milk, indeed of all food till the patient asks for it, in except in greatly exhausted cases demanding early support or stimulation, will give the happiest results. I give plenty of fluids, toast water, barley water, stimulating enemata of beef-téa, with, perhaps, a little whisky if needed, and enemata of water to relieve thirst. We know how difficult it

is to prevent hæmorrhage in ether nausea. Careful preparation for the operation by the free use of salines will minimize the ether and bowel disturbance. I am satisfied that the free use of the salines is of greater importance *before* operation than after in abdominal work. The unintentional administration of blue mass in this case of Dr. Packard's was a happy accident and helped recovery. I wish particularly to congratulate Dr. Packard upon the excellence of the toilet, the care to secure perfect cleanliness under such difficult conditions, and the perfect drainage. The careful removal of all foreign material from the bowel, free irrigation, and perfect glass drainage in two desperate cases has given him a triumph in two cases of adominal work.

DR. PACKARD: I must say a word in reply to Dr. Price in defence of "my friend opium." You remove a tumor; all goes well until water is injected into the abdomen. Pain ensues immediately. You give a grain of the extract of opium by the rectum, when the pain disappears, the patient goes to sleep and wakes in comfort. Are you not justified in attributing this to the opium, and relying upon the same measure in similar cases? Of course it would be a great mistake to treat all cases of peritonitis with opium. The saline treatment is proper in suitable cases, and saves many lives. So we may say of opium in suitable cases. The error is in exclusiveness, whether in the one direction or the other. We must use our judgment in individual cases, and prescribe in view of all the conditions present. In this case I think nothing would have served my patient as the 1 grain of the extract of opium did. It was not a case of peritonitis however, and I did not so regard it. But suppose some enthusiast in salines had ticketed the case peritonitis and immediately administered purges, I hardly think such prompt relief would have been afforded. I would like, while on this subject, to mention a measure which I have employed for many years, and which has repeatedly seemed to me to avert threatened peritonitis, and that is the application of a dozen leeches to the abdomen. After operation for stone especially, as well as in other cases of traumatism, marked benefit has been derived from the adoption of this plan.

DR. JOHN H. PACKARD read a paper on

TUMOR PROBABLY OF UTERINE ORIGIN, ATTACHED TO THE SMALL INTESTINE, REMOVED BY LAPAROTOMY.

For the following notes I am indebted to the kindness of Dr. L. I. Blake, resident surgeon to the hospital. It is due to him also that I should acknowledge his skill and attention in dressing and caring for this patient.

Kate M., native of Ireland, æt. 26, domestic, single. Admitted to St. Joseph's Hospital November 13, 1888. Family history good. Per-



sonal history also good, with the exception of an ill-defined attack she suffered from three years ago, probably resembling in some points the present one, and which was pronounced by her physician at that time to be intestinal inflammation of some sort. She had been examined by two physicians before admission into the hospital. The first stated that she had inflammation of the womb, while the second led her friends to believe that she was pregnant.

On admission, she stated that she had been suffering for three weeks, getting worse gradually. On examination her abdomen was found to be enormously distended, and exquisitely tender to the touch. Constant pain was felt throughout the greater portion of the trunk. Temperature  $101^{\circ}$  F.; pulse 100 and moderately strong. This being neither history of traumatism nor marks of violence, a vaginal examination was made, but no abnormalities noted. Her menstruation was established at 15, and has always been regular. When pain was sufficiently relieved to permit manipulation of the abdomen, distinct fluctuation was elicited, and in the left ovarian region was an area of dulness, which, though slightly variable, was not obliterated when the patient was turned on the left side. Deep pressure on this spot detected a hard mass which receded from the touch, but returned, the hand being kept in position. Owing to the extreme tension of the abdominal walls it was impossible to ascertain anything as to its nature or attachments. The tympanities and ascites failing to respond to medicinal agents, the patient growing weaker, and at the end of three weeks the respiration being interfered with, an exploratory incision was decided upon.

The patient being in tolerably fair condition, the operation was performed by Dr. Packard on Saturday, December 8. The peritoneum was found to be very much thickened and congested, its appearance being scarcely distinguishable from that of intestine. After removing five or six quarts of clear serum from the peritoneal cavity, the incision was enlarged, revealing a growth attached to a knuckle of intestine in the lower segment of the abdominal cavity to the left of the median line. This tumor, a little larger than a foetal head, was hard and dense in structure, weighing one and a half pounds; encapsulated and attached by a narrow pedicle, little more than an inch in breadth, which seemed to be a redundant portion of the capsule thrown around almost the entire circumference of the intestine. This was carefully dissected away from the intestine, and all bleeding points ligatured. The peritoneal cavity was irrigated thoroughly with a solution of the bichloride of mercury, 1 part to 15,000 of distilled water. The peritoneum and abdominal walls were sutured separately, the former with catgut, the latter with silk-worm

gut. A glass drainage tube, perforated and closed at the bottom, was placed in Douglas' pouch, and the wound closed and dressed.

The operation was done under full antiseptic precautions. The patient showed considerable shock after the operation, from which she rallied slowly. It was accompanied by persistent vomiting, which was relieved by one drop of creasote every two hours, administered in syrup of vanilla. A peculiar temperature was exhibited during this period, the same thermometer registering successively in the mouth  $96\frac{3}{4}^{\circ}$ , in the axilla  $97\frac{1}{4}^{\circ}$ , in the rectum  $101^{\circ}$ . During the first twenty-four hours there was not sufficient discomfort or restlessness to call for anodynes. Up to this time, about six ounces of bloody serum had been drained from the cavity. Four ounces of warm distilled water were then injected through the tube, and allowed to remain four or five minutes. Since that time, during the last seventy-two hours, not more than three ounces of serum have been removed, and scarcely tinged with blood. A short time after the warm water was removed, the patient complained of sharp, shooting pains, with marked tenderness over the abdomen. These became so severe as to require a suppository of opium (one grain), which soon induced a quiet sleep, with no return of pain on waking.

Thirty-six hours after the operation a slight but persistent cough was developed, probably due to hypostatic congestion, since change of position gave relief. During the last three days the temperature taken in the mouth has not risen above  $100\frac{1}{2}^{\circ}$ , the pulse varying from 90 to 100. Ever since the operation the patient has evinced a strong craving for food, giving milk the preference above anything else.

[The subsequent progress of this case has been very favorable. On the 11th of December (the sixth day) the glass tube was removed, and a soft-rubber one substituted, until the 17th, when it was dispensed with. On this day she had a spontaneous and quite natural movement of the bowels. Suppuration occurred in the suture tracks, probably from insufficient preparation of the silkworm-gut used. On the 24th of December (the sixteenth day) she was allowed to sit up in bed, the wound being quite healed.—P.]

DR. OSLER: I agree with Dr. Packard as to the pathological nature of the growth, and the possibility which he mentions is quite well recognized. An interesting feature of the case is the association of peritoneal effusion with solid growths in the abdomen. I have on several occasions been asked to see cases of ascites which depended upon the presence of tumors of ovaries or uterus.

## Gynæcological Society of Chicago.

*Regular Meeting, Friday, Nov. 16, 1888.*THE PRESIDENT, CHARLES T. PARKES, M.D.,  
IN THE CHAIR.DR. A. REEVES JACKSON read a paper on  
SOME UNCURED CASES OF UTERINE HÆM-  
ORRHAGE.

I desire to report the histories of some of the cases in which I have failed to cure a rather frequent ailment—uterine hæmorrhage.

*Case 1.*—Mrs. F. W., first consulted me on July 7, 1884. She was 28 years old, and had been married two and a half years; no pregnancy. Menstruation commenced at the age of 16, and had always been regular and in every way normal down to the time of marriage. After that event, a period occurred at proper time. The patient then missed two periods. After lifting a heavy weight, a flow of blood appeared and continued for several weeks. She visited Dr. Wm. Goodell, of Philadelphia, who curetted the uterus in May, 1883. I do not know what, or whether anything, was removed, but the patient considered herself well for four months. In the following autumn, two periods were again missed. After a trifling misstep a red flow began, and continued about one-half of the time for nine months; then I saw her. She was a large but not tall woman, weighing 162 pounds, of dark and rather dull complexion, and habitually despondent temperament. There was no history or present evidences of any disease of important thoracic or abdominal organs. The pelvic viscera were found to be entirely normal in size and position. The os uteri was rather small, but of virginal shape, and free from redness or erosion.

On July 9, I administered ether, and curetted the uterine cavity. A few fungous granulations were removed, and an application made of Churchill's iodine solution. This latter was repeated every four to seven days. For about three months menstruation appeared at intervals of four or five weeks, rather profusely, and lasting from seven to ten days. Then the inter-hæmorrhagic periods became shorter—about three weeks. During the spring of 1885, the intervals were about two weeks; once, only nine days intervened. In the early part of 1886, the flow was more irregular, recurring every three to six weeks. In July, however, it appeared after an interval of two weeks and lasted three weeks, not profusely but constantly. In August following, I again used the curette, without any result. Nothing was removed, and no change was produced in the symptoms. In June, 1887, the same operation was followed by a like negative result. A month later, my connection with the case ceased. During the time of my attendance

(which was not continuous, but interrupted sometimes for periods of several months) the treatment consisted in efforts to overcome habitual constipation, and the intra-uterine application of iodine, carbolic acid, a solution of ferric alum, etc. These applications were always preceded by the introduction of a No. 12 bougie. There were two unfavorable conditions present in this case which I could not obviate. The one was tight-waist dressing, and the other an insuperable objection to active exercise.

Within the past few days the husband of this patient called upon me and stated that the subsequent history of his wife presented no material change; that, at times, she seemed better, and then became worse again. She is now under the care of a prominent physician of this city, and is thought to be improving.

*Case 2.*—Mrs. E. D., placed herself under my care January 22, 1885. She was a Jewess, had been married three years, and was never pregnant. Menstruation began at 12, had never been distinctly regular, and for many years was rather scanty. During the past year, however, the discharge had recurred with greater frequency than ever before, the interval being less than four weeks, and it had become shorter and shorter, while at the same time, the quantity of discharge at each period had steadily increased. During the month immediately preceding my first interview with the patient, there had been three attacks of flowing.

In personal appearance, this patient was noticeable and rather peculiar. She was of medium height, and much too stout to be termed plump. She had the very dark and abundant hair which is characteristic of so many of her race, and there was a marked growth of hair upon her upper lip, on her face from the temporal regions to the chin, and on her neck.

Interrogation failed to elicit any evidence whatever of cardiac, pulmonary, hepatic or renal disorder. The patient ate well, slept well, and felt well. She was only annoyed by the frequency of the bloody flow. A pelvic examination revealed no abnormal condition, position, or shape of any of the organs. The single disordered symptom discoverable consisted in a discharge of dark blood which was seen slowly oozing from the os uteri. The introduction of the sound was easily accomplished, and was followed by a rather profuse flow of redder blood.

Two days later, under ether anæsthesia, the cervical canal was moderately dilated, and the interior of the uterus curetted. A small number of fungosities were removed and the uterine cavity swabbed with Churchill's iodine solution. On February 20, a bloody discharge appeared, and continued more or less profusely until March 14—three weeks. I then made an application of Monsel's solution of iron. The discharge ceased

for two days; it then reappeared and lasted to March 23—seven days. I again dilated the cervical canal and passed in a curette, without removing anything, and applied the iodine solution. There was no discharge for eight days subsequently. Then a flow which seemed like that of menstruation appeared. It lasted five days, ceased two days, reappeared and continued with occasional intervals of one or two days until April 23, when it became profuse and seemed like menstruation again. After a few days the flow diminished, but a reddish-tinged oozing continued until a more profuse flow indicated the return of catamenial discharge. On November 9, the patient reported that the longest time she had been free from bloody discharge was four days.

During all that time I had availed myself of frequent opportunities of making local applications of iodine, carbolic acid, Monsel's solution, alum, fused nitrate of silver, etc. Also, I had given quinine, ergot and viburnum, and on several occasions I had gently dilated the cervical canal, and tried to get away something with the dull curette.

No especial change was noticed in the symptoms in the summer of 1886, during which time all treatment was suspended. In January, 1887, the patient informed me that once only she was free from hæmorrhage for a period of three weeks. Treatment was then resumed. I introduced a tupelo tent and followed the dilatation by a very thorough application of iodized phenol. This was repeated at intervals of five to seven days for several weeks. There was no improvement. Then, I tried nitrate of silver for awhile, but the hæmorrhage continued. In the summer of 1887, the patient went to Europe with her husband, and for a few weeks while there she was somewhat better. In the following autumn, however, after her return, the hæmorrhage was as constant as before. On December 23, I dilated the uterine canal mechanically under anæsthesia, and removed two large granulations. She died one week later of peritonitis.

*Case 3.*—Mrs. W. L., æt. 35 years, had been married seven years, and had two children, the younger being 16 months old. I saw her on September 5, 1885. When the baby was 10 months old, menstruation appeared, and for two periods was quite normal, lasting four days. The third came a week to soon and lasted two weeks. After an interval of two weeks it again appeared, and when it had persisted ten days, necessitating two or more napkins daily, she applied for relief. She then showed effects of the loss in pallor, impaired strength, and enfeebled digestion. The baby was weaned, and the patient took strychnia, quinine, and arsenic. I found no pelvic cause for the hæmorrhage unless it might have been a slight degree of subinvolution. The uterus was freely movable, in normal position, free from

erosion, and there was no swelling or undue tenderness in the region of the ovaries, tubes, or broad ligaments. Constipation was present, and I prescribed salines and a regulated nutritious diet. Subsequently, the hæmorrhage continuing more or less constantly, although not profusely, other means were tried, many of them rather empirically. They included ergot, hydrastis, viburnum—all without perceptible effect. Then I dilated the cervical canal and explored the interior of the uterus with finger and curette. Nothing was found.

After about eight months, the patient placed herself under the care of an electrician, who treated her for nearly six months. Then she went to Cincinnati, and remained several months under the care of a distinguished gynecologist. She returned to me in January last, and stated that she had not at any time been more than ten days without a bloody discharge, and rarely more than three days. The menstrual periods were distinguishable by the more profuse flow which marked their presence, and they were fairly regular.

Once more I dilated the cervix under etherization, and drew a curette over every part of the intra-uterine surface, taking especial care to get the instrument into the cornual depressions. No tissue was brought away, and very little blood. I subsequently made internal applications of tinct. iodine, tannin, Monsel's solution, and once, at the close of what seemed to be a menstrual period, I applied nitric acid. While, at times, there was a diminution of the discharge, the improvement was only temporary, and in July last she again passed from my care.

*Case 4.*—The notes of the following case were kindly furnished me by Dr. J. H. Stowell. M. M., a single woman, 25 years of age, was born in Canada. Menstruation began at 12, and was quite regular until she was 19; then the flow became prolonged, lasting sometimes five or six weeks. This was followed by regularity, both in quantity and times of recurrence for a few months, when menorrhagia again appeared. At the age of 22 she was examined by a physician at Ottawa, who curetted the uterus, with what immediate result is not known, but the patient was free from all sanguineous discharge during a period of three months. Menstruation then returned and was regular and in every respect normal for the following four months. Becoming menorrhagic again the curetting was repeated, with the same temporarily beneficial results as before. Again, after a few months, the flow became profuse and a third curetting was made six months after the second, the latter time without apparent benefit.

The patient removed to this city and came under the care of Dr. Stowell, with whom I saw her in the early part of the current year. On January 21st, after thorough dilatation of the uterine

canal, I curetted very carefully, removing a small number of granulations. The operation was followed by the application of Churchill's iodine. For two months subsequently there was no bloody discharge. Then it reappeared, and Dr. Stowell informs me that he has continued to treat the symptom in a routine manner locally and generally, but without satisfactory result. Latterly this case presents a curious feature: the flow is very profuse every alternate month, and normal the other. Within the past fortnight this patient has been placed under the care of a gentleman skilled in the application of electricity, in the hope that she may be benefited by that remedy.

It will be observed that in the foregoing cases there were some features common to them all. Thus, in none of them did the hæmorrhage take the form of rapid, profuse flow suddenly exhausting the patient, as we not infrequently notice in cases which the discharge depends upon an abortion, or upon the presence of cancer or fibroid neoplasm. On the contrary, the evil effects produced were the result rather of the persistence of the discharge covering long periods of time. Again, in none of them was there evidence of disease of the lungs, heart, liver, kidneys, or other important organs causing a depraved condition of the blood or pelvic plethora. In none of them was there a history of hæmatocele, pelvic inflammation, or detectable pelvic swelling. In none of them was there any displacement or flexion of the uterus, or dislocation of the ovary. Indeed, in none of them could I determine a sufficient local or systemic cause. I have thought that possibly some such cause might exist in disordered condition of the Fallopian tubes or pelvic cellular tissue not ascertainable by our present known methods of investigation.

Being aware of the influence of malarial poison in producing congestion of the abdominal and pelvic viscera, including perhaps the mucous membranes, I have not failed to take this possible etiological factor into consideration and to make careful inquiry with the view of ascertaining its existence. The result in each case was wholly negative.

My object in reporting these cases is twofold: first, to ascertain whether others besides myself have met with similar baffling experiences; and, secondly, to obtain such practical hints in the treatment of such cases as may hereafter lessen the number in which we have to acknowledge defeat.

DR. D. T. NELSON: I do not know that I can say very much to assist the doctor in the treatment of his cases, for that is evidently what is intended and what we should all need under the circumstances. I cannot say that I have seen just such cases; I only regret that the doctor was not able to follow the cases even longer. One died; I would like to know if there was any

post-mortem examination. Perhaps the cause of death was such that it would hardly be satisfactory if there were a post-mortem. It seems to me that the only way we can arrive at a conclusion as to the nature of the disease and consequently the proper method of treatment, is to follow them longer. One case that I have seen—and there is but one that seems to me at all like these the doctor has reported—I was fortunate enough to see one or two years after a somewhat similar experience by other gentlemen, in which nothing was reported to have been found; in which there was curetting; but as I saw it subsequently there was plain evidence of fibroid tumor. Perhaps if these cases were seen longer or examined post-mortem there would be a satisfactory explanation of the persistence of the hæmorrhage. I think one of the small single or multiple fibroid tumors, which cannot be detected by the most skilful finger, or by any means of examination that we have at present, are likely to produce such results, and I believe they may lie dormant for a longer period than these cases have been observed; I am quite sure that I have seen them—and eventually, perhaps of their own nature, develop so as to be found; perhaps from some exciting cause other than that. There is another cause, it seems to me, for these hæmorrhages, concerning which I can hardly speak rightly. I believe the writer of the paper is better able than any of us to talk on that subject, and I hope he will give us some information in that direction when he closes his remarks; namely, will disease of the Fallopian tubes produce hæmorrhage from the uterus? I do not mean by that a salpingitis that will fill the tube with pus or serum, and be so large as to be easily felt, but actual disease of the mucous membrane, perhaps not extending much deeper than the mucous membrane, but capable of producing a continuous hæmorrhage. I confess to being unable to point out a case in my experience, or in that of others, that is plain, but I simply throw it out as a hint, as a possible explanation, for further examination. Perhaps it is not a parallel case, and yet it seems to me that there is a similar cause. A woman after menstruation, if you please, a week after the cessation of the menstrual period, takes cold, has a slight cough, has a traumatism or some slight disturbance in the pelvis giving pain and other evidences of inflammation; we all know that one of the most common symptoms attending upon the pain, etc., is hæmorrhage from the uterus. Not a severe one, perhaps, but a slight flow. You may say that means congestion of the whole pelvic viscera. True, it ordinarily does. But what does produce the uterine flow? Is it the uterus alone, is it the ovaries alone, is it the broad ligaments only, is it the Fallopian tubes and the uterus, is it the Fallopian tubes only? It does seem to me in some instances that it is not only the uterus, not only

the broad ligaments and vascular structures about the uterus; but that the Fallopian tubes and ovaries have very much to do with this condition. But the reader of the paper is able to enlighten us more than any one else in that direction. I believe if these cases were observed long enough, we should find a congestion of the uterus produced by a fibroma or sarcoma, or disease of the Fallopian tubes or ovaries, and pre-existing disease of the ovaries and tubes produce hyperemia of the uterus that favors the development of fibroma and sarcoma.

DR. C. T. PARKES: I should like to mention a report I have recently read in one of the foreign journals that applies somewhat to this question. A case was reported in which all these remedies were used; curetting and intra-uterine dilatation, and finally the surgeon concluded he would make an abdominal section. After making the section he found what he reports as a cavernous angioma of one of the ovaries. It was removed and the case cured.

DR. ROBERT TILLEY: It is my special interest in the last case reported by Dr. Jackson that has given me the honor being present this evening. I would like to correct a single remark towards the close of the case, namely, that the patient was placed under a gentleman skilled in electricity. The patient came to me for general counsel as to what would be the best course for her to adopt under the circumstances. I advised her to get letters from the doctors who had been in attendance on her and to send them to her parents, with the supposition that they would consult with the family physician who had previously curetted the uterus. Meanwhile, she was flowing considerably, and asked me if I would not give her such general instructions as would enable her, at any rate, to be freed from a certain amount of anxiety which she would necessarily be under apart from that. I said that under those conditions I would, with the understanding that if any serious symptoms developed I should not think of taking charge of the case. At this time I considered the question of recommending them to try the application of electricity to the interior of the uterus, and I thought seriously of recommending it strongly; but looking back upon my own experience with reference to electricity, I did not feel at all confident under the very indefinite conditions which the case presented, and I meanwhile thought it desirable to use such hæmostatics internally as would be suggested. In looking over the field, I concluded that without any doubt whatever ergot and iron had been used as fully as it would be desirable to use them, and the first thing I thought of was the common remedy of vinegar. I administered the vinegar for two or three days without any advantage whatever, internally; I then descended, perhaps I might say, to the use of hamamelis, and in order to get the

genuine article, I recommended Pond's extract. This did not have any influence at all. There seemed, however, to be a sort of periodic character about it, and I used quinine for a few days, without any advantage; and, in fact, it seemed to me from the report that the flow became greater. Then I resorted to turpentine, 10-drop doses in an emulsion, and after she had taken two doses of this turpentine there was a sensation of strangury and it was dropped for one day. Information was given me that with that strangury there was a manifest diminution of the flow. I concluded that it was fair to infer that the organs in the pelvic regions were, in all probability, susceptible to the turpentine, and I recommended its use in smaller doses and added to it some camphor water. She continued to use the turpentine, and the flow continued to diminish; there was no longer any sensation of strangury after she had used the camphor-water in conjunction with it, and on Saturday last I was informed that the flow had ceased altogether. She called at my office and I found that the pulse, which had previously been 100, was reduced, to 80, and the peculiar sensation of palpitation which she had complained of as existing before was almost completely removed, and she was feeling in every way a good deal better. I heard from her again on Tuesday; she was then on her way to one of the suburbs, with the understanding that I should hear from her again to-morrow. I feel satisfied that the flow has not returned, otherwise I should have heard. In looking over the case in the first instance, I remembered that some of my brother ophthalmologists are curing everything, from epilepsy to corns, with glasses or tenotomy of the internal recti, and I examined the eyes to see if I could find anything of interest, but I could not see anything worthy of attention. I also examined the blood microscopically to see if there was any peculiarity there, but could find none. The use of the turpentine seems to have had the special advantages of securing at any rate, a temporary cessation of the hæmorrhage.

DR. A. REEVES JACKSON: The existence of fibroids as a probable cause in some of these cases, as suggested by Dr. Nelson, had occurred to me. The question of possible pregnancy also arose, and I made such inquiries and investigations as I hoped would lead to a settlement of the latter point especially. We know that in fibroid growths of the uterus hæmorrhage becomes by-and-by a prominent symptom, and usually it is the one which first calls the attention of the patient to her condition; and in these cases we usually have no trouble in the diagnosis where there is present either a polypus or a fibroid of sufficient size to alter the shape of the uterus or to be felt within the cavity of the organ. I can conceive how a very small fibroid, incapable of detection by ordinary methods and ordinary skilled hands and

fingers, might produce hæmorrhage, but would it yield to the medical treatment of a fibroid? If it did not, we should hardly feel justified in making a laparotomy to discover the existence of a fibroid that presented no other evidence of its existence than hæmorrhage. It is true that patients nowadays submit to laparotomy when urged to do so; yet the one who urges should have some kind of objective reason upon which to base his advice. In none of these cases could I detect any change whatever in the shape of the uterus. The fact is that when we find a fibroid as the cause of hæmorrhage it is already surgical. It is large enough sometimes to have existed, with their slow rate of growth, for many years, and yet hæmorrhage has probably not been present until the latest part of the history.

Disease of the Fallopian tubes I have no doubt is a frequent cause of persistent uterine hæmorrhage. Primarily, the blood may have its source in the tube; later, by overaction—by the mere bleeding—there is produced manifest disease of the endometrium, as in the case last cited. But, granting this, inasmuch as we can only reach the uterine lining anyhow by our topical treatment, even if we have a suspicion that there may be tubal disease, it does not aid us in deciding what to do for it. The ethics of the condition are in doubt.

Allusion has been made to the death of the third patient. She died of peritonitis following the operation. I have reported it in order to call attention to the danger of what is usually considered a simple and safe operation. In this case the operation was done under the strictest antiseptic precautions; every care was taken to avoid any danger from that source. Unfortunately, I was obliged to leave the city shortly after the operation, leaving the patient in an unsatisfactory condition, temperature  $102^{\circ}$ , rapid pulse, red cheeks, and evident high constitutional excitement. On my return I found her still worse, and shortly afterwards she died of peritonitis, whether septic or not I do not know. The dilatation was mechanical; was not made by tents, which I consider a dangerous method of treatment.

I did not mention in the paper an important fact in the subsequent history of the last case. It was this: During the last examination I detected a distinct swelling at the side of the uterus apparently in the Fallopian tube. Then I suggested that if the patient did not get better here was a reason why we might properly make a laparotomy—not for the hæmorrhage, but for the swelling which was possibly the cause of it. The curetting on three occasions certainly had a very satisfactory effect. On one occasion, for four months subsequent to the operation the patient had no bloody discharge whatever, natural or unnatural, which would seem to indicate that, at that time at least, the cause of the hæmorrhage was in the

uterus, and that the effect of the remedies applied more thoroughly after the dilatation had a controlling influence for a long time. This is very satisfactory to a patient who has been having a profuse or prolonged hæmorrhage. This patient was under the care of excellent men in Canada who, so far as I know, never detected any swelling, and I infer from this fact that the latter symptoms were of comparatively recent appearance.

The nitric acid, which I applied in one case, I formerly used a great deal more than I do now. My method of using it is that recommended by Athill some years ago. The uterus is previously dilated, and when sufficiently open, the pure nitric acid is passed into the uterine cavity on an ordinary cotton-wrapped applicator. I place the patient on her back, introduce a perineal depressor, seize the anterior lip of the uterus, draw the organ down, and surround it entirely with cotton which has been dipped in a solution of bicarbonate of soda. The applicator is dipped into the acid, passed into the uterine cavity, and held there for a few minutes. It is then withdrawn and the vagina syringed until all fuming ceases. Then I remove the tampons from about the cervix, and another tampon saturated in glycerine is placed over the os uteri. Such was the method used in this case. The nitrate of silver I applied in this way: A few grains of the crystal are melted in the bottom of a test-tube. A silver uterine probe is dipped into the fluid and withdrawn a few times, until a bead is formed on the end of the instrument the size of a grain of rice. This is passed through a speculum up into the interior of the uterus and held there for a few minutes, and slowly drawn out so as to come in contact with the surrounding membrane. This method has been recommended as very effective in chronic cases of menorrhagia. The hydrastis I have used a good deal. Loewenthal has reported several cases in which he had used hydrastis for preventing menstruation absolutely in persons to whom it was injurious; chlorotic and anæmic patients, he affirms, have been effectually cured by the use of hydrastis, given so as to absolutely obliterate the function of menstruation. I have never used it for this purpose, but I believe in the principle. I do not believe menstruation, of itself, does any woman any good.

Prof. Earle asks about the relative frequency of inflammation before and after the advent of antiseptics. I am hardly prepared to answer that question. If the theory of septic inflammation is correct, all diseases resulting from the ordinary operations ought to be less if antiseptic precautions are used. I remember but three cases of ordinary operations in which death followed. Inflammation was present in all of them, and it may have been of a septic character, and so may it have been in this last case which I have related. But the patient complained of pain immediately after



the operation, and she was never free from pain until the time of her death, six days later.

Ergot I have not found to be beneficial in any condition of the uterus involving hæmorrhage, unless it be subinvolution during its soft stage where the uterus is large and heavy. In those cases I believe ergot is an excellent remedy. That condition was not present in any of these cases. Whether, in one of them, the cessation of menstruation for two months indicated pregnancy, I do not know, but there was no other evidence of it; there was no fœtus observed, nor was the history that of an early abortion, so that the single symptom of absent menstruation in a woman who was irregular at times was not so significant as it might be under other circumstances.

In the case stated by Dr. Parkes, the disease of the ovary was found, as I understand, after all other theories and much treatment had been exhausted, and it was supposed that there *might* be some disease *somewhere* in the pelvis which could only be detected and possibly removed by laparotomy. But it is doubtful whether this would be a safe rule to follow even when all technical means and all known remedies for persistent hæmorrhage have failed. If the woman is not endangered by the hæmorrhage would it be right to subject her to any risk of her life for a *possible* cure? If life were jeopardized there could, of course, be no question as to the propriety of laparotomy. This, however, was not the condition in any of the cases which I have related.

Dr. Addison H. Foster reported *A Case of Hydræmnion*.

Dr. Edward B. Weston read a paper on *A New Procedure in Cases of Anticipated Complete Rupture of the Perineum*.

DR. BAYARD HOLMES presented specimens of

#### CULTURES OF BACTERIA FROM THE URINE OF A CASE OF NEPHRITIS AFTER SCARLET FEVER.

The specimens are of such a character that, while they may not be in themselves particularly interesting, I hope they are of sufficient account, in connection with the paper I wish to present at the next meeting, to deserve a moment's attention. My paper is upon the subject of "Secondary Infection in Acute Infectious Diseases of Children." One of the diseases which I treat of is scarlet fever, and as the complication that is perhaps the most alarming and serious in scarlet fever is nephritis, I have taken a good deal of pains in studying the subject. Through the kindness of a neighbor physician I had a chance to examine the urine of a case of nephritis after scarlatina, and to make a few cultures from it. On the first day that any symptom of nephritis was noticed there was a very large amount of blood in the urine, and I took pains to collect some of it in a perfectly sterilized flask after the first part had passed away, so as to get it in as nearly a

sterile condition as possible. I took it home and planted the sediment in a few tubes of gelatin. The gelatin in a very short time showed small colonies growing along the track of the needle. From isolated colonies, the second series of tubes was planted, and they begin to show a characteristic growth. Only one of the first series of six tubes remains sterile, and only two of them show any signs of mixed infection. The remaining three tubes are evidently pure cultures of the *Streptococcus pyogenes* of Rosenbach. This is the microbe that produces the enlargement of the cervical lymphatics early in scarlet fever. I present these specimens because they are short-lived, and in the hope that I may be afforded the opportunity of examining, under favorable circumstances, the urine of a few boys suffering from this complication.

## FOREIGN CORRESPONDENCE.

### LETTER FROM PARIS.

(FROM OUR REGULAR CORRESPONDENT.)

*Value of Strophanthus and Digitalis—Sulfonyl and Chloral—Cardiac Ectopia—Pathogenesis and Treatment of Tetanus—Menstruation after Removal of the Ovaries.*

The results from a long discussion that has been going on at the Academy of Medicine on the therapeutic value of strophanthus, digitalis and other cardiac remedies seem to show that, as regards strophanthus, its effects are analogous to those of digitalis. Professor Germain Sée prefers to the preparations made with the entire plant the active element of those plants, such as the alkaloids, the glucosides and the salts which are of a definite form and will always, in the same dose, produce identical effects. He therefore prefers strophanthin to strophanthus, and digitaline to digitalis, and as regards their action on the heart he showed that strophanthus determines only a feeble diuresis, and that it acts but little on the dyspnoea of affections of the heart. There are three or four other cardiac medicaments each of which responds to a particular indication. If the physician wishes to act directly on the heart, he may choose between digitalis, the salts of potash, sparteine and strophanthus, but digitalis should be preferred, as it is the most diuretic. Dr. Laborde, Chef of the Laboratory of the Faculty of Medicine, after a series of experiments conducted by him, demonstrated the superiority of the active elements, glucosides or alkaloids, over the entire plant. The former, in medicine, he said, represented progress, the latter represented routine. In employing substances chemically defined, the physician substitutes the formula to the receipt, as expressed by Dumas. He studied various pharmaceutical prep-

is deceased, and should remain in that condition, one has grave doubts as to the validity of the arguments used, especially when they are characterized by warmth rather than moderation.

There are some papers in this Report that make it one of unusual interest. Dr. John Guit ras writes a very valuable paper on "Some Observations on the Natural History of Epidemics of Yellow Fever, based on a Study of the Mortality Statistics of the City of Key West; also a Plea in Favor of a continued Investigation of this Disease by the Government of the United States." This is one of the most valuable of the many excellent contributions Dr. Guit ras has made to American medical literature. The Report includes also three contributions to the subject of the "Food Supply of Seamen," by Dr. P. H. Bailhache, Henry W. Sawtelle, and Chas. B. Goldsborough. Dr. Sawtelle's contribution includes a report of scurvy treated at San Francisco during the seventeen years ending June 30, 1888.

Among the "selected cases from hospital practice," are some interesting reports. Surgeon W. H. Long reports fourteen operations for the radical cure of hernia. Apparent permanent cure was obtained in thirteen cases. Drainage tubes and antiseptic dressings were used in all these cases. "The danger to life seems very small, there being not even an expected amount of constitutional disturbance."

Dr. Long reports also a case of ankylosis of lower jaw relieved by making a false joint. A diagram of the operation is given. The patient was discharged cured in twenty-two days, with a joint that worked perfectly, and with the ability to masticate all kinds of food.

Dr. Long's third report is on a case of  edema glottidis, with apparent death, relieved by laryngotomy. Under this report is a note on a case of death from  edema glottidis due to quinsy, making the second case of  edema of the glottis from quinsy at the Marine-Hospital at Detroit in one year.

Surgeon Henry W. Sawtelle reports three cases. The first was one of reamputation of the left leg at the superior third for ulcer and neuralgia of the stump; complicated by pneumonia and py emia; followed by recovery. The second case was one of cerebral h emorrhage, with right hemiplegia and aphasia, from multiple injury. After several operations for the relief of pressure, the patient recovered. The third case was one of compound comminuted fracture of both bones of the left leg, with lacerated wound of the face.

Passed Assistant Surgeon W. A. Wheeler reports a case of lacerated wound of the knee, with rupture of the internal lateral ligament. The patient recovered with a fairly good knee.

Passed Assistant Surgeon Charles E. Banks has some valuable statistical material in regard to

syphilis, pneumonia, and typhoid fever. In regard to syphilis, from 1877 to 1885, inclusive, the Marine-Hospital service treated 45,118 cases of syphilis, of which 20,415 were of the primary lesion, and 24,073 of the secondary type. Of the 20,415 primary cases, 3,637 were classified as hard chancre, equivalent to 17.8 per cent., and 16,778, or 82.2 per cent., were soft chancres; thus making the proportion of hard to soft chancres a little less than 1 to 5. Puch , whose statistics were based on 10,000 chancres, found 1 indurated to 4 simple chancres. The tables given show a grand ratio of 14.8 cases of syphilis, primary and secondary, to the hundred of all classes treated.

In regard to pneumonia, the reports of the service since 1872, exclusive of three years, show a total of 3,011 cases, and 496 deaths, on a mortality of 16 per cent. The records of the service since 1872, except three years, show a total of 2,503 cases of typhoid fever, and 374 deaths or 14.9 per cent.

Passed Assistant Surgeon S. T. Armstrong reports six cases. The first case was one in which necrosed bone was removed from the tibia and clavicle, the necrosed portions having been present for many years without causing irritation.

Dr. Armstrong's second case was one of malformation of the hand, in which an unsuccessful operation was made for the separation of webbed fingers. His third case was one of fracture of the ischium, with recovery. The fourth case was one of py emia consequent upon a wound of the toe, with death, illustrating the necessity of antiseptics. Dr. Armstrong reports also a case of cure of bunion by resecting the first metatarsal bone. His final contribution to the Report is a case of excision of the tunica vaginalis for the cure of hydrocele.

Passed Assistant Surgeon P. C. Kalloch reports a very interesting case of recovery from sacculated aneurism of the abdominal aorta.

Passed Assistant Surgeon P. M. Carrington reports a case of recovery after rupture of the quadriceps extensor femoris.

Two interesting cases of enteric fever are reported by Assistant Surgeon F. C. Heath, and Acting Assistant Surgeon T. M. Holmes, of Rome, Ga., reports a case of multiple neuritis.

The volume closes with a series of reports of fatal cases, with autopsies.

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DR. KARL FRIEDRICH WERNER NASSE, head physician of the Rhenish Provincial Lunatic Asylum and honorary professor in the University of Bonn, has just died at Bonn. He was the author of "Proposals for Legislation for the Treatment of the Insane, with special reference to Prussia," and of numerous essays on Diseases of the Mind in the medical periodicals of Rhenish Prussia.

## MISCELLANY.

**THE ILLINOIS DENTIST.**—The Dental Society, of Chicago, through C. Stoddard Smith, Chairman of a Special Committee, has formulated a bill, to which the approval of members is solicited, with the intention of at once presenting it to the Legislature. It provides for the appointment by the Governor of a Board of Examiners, five in number, and for the examination and registration of all dentists. The Board is to be supported by the fees for registration and examination, the latter being \$10 and a license fee \$5, while the registration fee is \$1. Penalties of \$25 to \$50 for the first offense, \$50 to \$100 for the second, and not less than \$100 nor more than \$250 for the third are provided, each operation to constitute a separate offense and one-half the penalty to go to the Board and the other to the school fund. It also provides that all dentists holding the certificate of the Board shall be exempt from jury service.—*Chicago Times*.

**DR. WILLIAM GILMAN BRECK**, of Springfield, Mass., died suddenly, of apoplexy, on January 23, 1889. He was born in Franklin Co., Vt., on November 14, 1818. He was senior surgeon of the Springfield Hospital, had been President of the Hampden Co. Medical Society, and was a member of the American Medical Association.

**DR. E. B. BRANDT**, of Mechanicsburgh, Pa., died on January 16, 1889, aged 60 years. He was one of the most prominent physicians in Southern Pennsylvania. He was graduated from Jefferson Medical College in 1845. He became a member of the American Medical Association in 1872.

**THE Dominion Dental Journal**, the first number of which has just appeared, is edited by W. George Beers, L.D.S., of Montreal, the co-editors being C. S. Chittenden, L.D.S., of Hamilton, Ont., and A. C. Cogswell, L.D.S., of Halifax, N. S. It is a monthly journal of 48 pages.

**PROLONGED GESTATION.**—Dr. W. H. Murray (Gala-shiels) writes: Mrs. S., aged 25, married five years, no family, consulted an Edinburgh gynecologist in January, 1888, and was told by him that her ovaries were diseased, and that she had better go to the hospital for treatment. Preferring to remain at home, she asked me to attend her. Rest in bed and the hot douche was all the treatment employed, my attendance ceasing on February 4th. On March 24th Mrs. S. stated to me that she had menstruated on February 12th, but she had not seen anything since. She complained of morning sickness and a feeling of *malaise*. The nipples were prominent, and there was a distinct areola around them, with enlarged mamillæ. I gave it as my opinion that she was pregnant and that, in all probability, it dated back to her last menstruation on February 12th. I heard nothing further of my patient until November 28th, when she sent for me, thinking she was in labor. Both the patient and nurse declared that she was having regular pains, recurring every ten minutes. On making a vaginal examination I could find no evidence of labor having set in, nor did I find any improvement on a subsequent visit in the afternoon, although she still declared she felt pains at regular intervals. A dose of opium and an assurance from me that the pains were not the right kind had the effect of settling the pains and putting her mind at rest. I called on the following day, and found my patient busy with her household duties and quite comfortable. On the afternoon of January 11th unmistakable labor pains set in, and by 9 P.M. the cervix was dilated to the size of a sixpence. Progress was slow, due to the presentation being occipito-posterior and the head a big one. The cervix was not half dilated by 8 P.M. on January 12th, though the membranes were still unruptured. Finding her strength becoming exhausted and no progress being made, I deliv-

ered with forceps. Unfortunately the infant (stillborn) was not weighed until the following day, when it scaled 7½ pounds and measures 19½ inches in length and 15½ inches round the shoulders.

The interest of the case lies in the length of the pregnancy. Did the woman become pregnant after her period, beginning February 12th, 1888, the verdict I gave on March 24th? If so, the period of gestation was eleven months almost. Allowing five days would bring the date of expected birth to November 19th, but instead it occurred on January 12th, 1889, or 330 days. Suppose the pregnancy took place before the next period, which would have occurred on March 12th, is it at all likely that I could have found such pronounced symptoms of pregnancy as I did on March 24th? Even admitting that the pregnancy did occur in March, still she carried the child *in utero* until January 12th following, that is to say, 294 days after I had pronounced her pregnant. In my own mind I am quite satisfied that this woman became pregnant after her February period, beginning on February 12th and ending on February 17th, so that she actually carried the child 330 days. In Taylor's *Medical Jurisprudence* I find that 330 days is the longest on record, and in none of the cases therein mentioned are the facts so clear as in this case of mine.

The dates I have taken from my daily visiting list and are absolutely correct. Dr. Burnett, who has acted as my assistant for the last eighteen months and who also saw the woman on March 24th, can verify every date given.—*British Medical Journal*.

**HEALTH IN MICHIGAN, JANUARY, 1888.**—For the month of January, 1889, compared with the preceding month the reports indicate that scarlet fever and neuralgia increased in prevalence.

Compared with the preceding month the temperature in the month of January, 1889, was slightly lower, the absolute humidity was slightly less, the relative humidity was slightly more, and the day and night ozone were less.

Compared with the average of the month of January in the three years, 1886-88, intermittent fever, consumption of lungs, inflammation of kidney, and pneumonia were less prevalent in January 1889.

For the month of January, 1889, compared with the average of corresponding months in the three years 1886-88, the temperature was much higher, the absolute humidity was more, the relative humidity was less, the day ozone and the night ozone were more.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of January, 1889, at sixty places, scarlet fever at ninety-four places, typhoid fever at thirty-eight places, measles at eleven places, and small-pox at eleven places.

Reports from all sources show diphtheria at eight places more, scarlet fever at thirty-seven places more, typhoid fever at eight places more, measles at seven places more, and small-pox at five places more in the month of January, 1889, than in the preceding month.

A part of the increased prevalence of communicable diseases is doubtless only apparent, because a knowledge of a large number of outbreaks not otherwise reported, was obtained from the annual reports of health officers and clerks sent to this office during the month of January.

**THE TOOTH IN THE APPLE.**—Chandler Jones, a negro, is in jail for a burglary on Mr. Milton's store in Hazelhurst. The circumstances of his detection are peculiar, and the work was done by Detective E. A. Wilson, who had found nothing in the way of a clue except an apple, out of which two bites had been taken. He at once noticed that the two front teeth of the biter were not only irregular, but peculiar. He imagined that when the biter was a boy an old tooth remaining in the gum caused a new tooth to grow one-sided. The apple was placed in water so as to prevent shrivelling, and, keeping his secret

to himself, Wilson went down to Baxley, where he knew a number of loafing negroes.

Walking into a store, he bought some apples, and biting one, said to a well-dressed negro who had attracted his attention: "Try one." The negro accepted the gift, and when he raised the apple to his mouth for a second bite the handcuffs were placed on his wrists. There never was a more astonished negro. He was under arrest so quickly that he was unable to offer any resistance. He gave his name as Chandler Jones, and was found to be wearing a suit of clothes and a watch and chain taken from Mr. Milton. Jones was taken to the store, where he showed how he obtained entrance on the night of the burglary, and how the first thing he saw was a barrel of apples. He picked up one, and after two bites laid it down on Mr. Milton's desk.—*Macon Telegraph* (Ga.).

#### PAMPHLETS RECEIVED.

Heitzmann, Carl, M.D., and Bödecker, C. F. W., D.D.S., M.D.S. *Contributions to the History of the Development of the Teeth*. Reprint from the Independent Practitioner.

Rohé, George H., M.D., Baltimore, Md. *Diseases of the Skin Associated with Disorders of the Female Sexual Organs*. Reprint from the Buffalo Medical and Surgical Journal, February, 1889.

Rohé, George H., M.D., Baltimore, Md. *On Corpulence, especially its Treatment by a Pure Milk Diet*. Reprint from Maryland Medical Journal.

Kellogg, J. H., M.D., Battle Creek, Mich. *Experimental Researches Respecting the Relation of Dress to Pelvic Diseases of Women*. Reprint from the Transactions of the Michigan State Medical Society, 1888.

Cuddy, J. W. C., A.M., M.D., Baltimore, Md. *Some Phases of the Civil Law in Relation to the Development of Man*. Reprint from Gaillard's Medical Journal.

Fry, Frank R., A.M., M.D., St. Louis, Mo. *A Clinical Study of Alcoholic Neuritis*. Reprint from St. Louis Courier of Medicine.

Canfield, William B., A.M., M.D., Baltimore, Md. *Report of the Section on Microscopy, Micro-chemistry and Spectral Analysis on the Microscopical Examination of Urinary Sediment*. Reprint from Transactions of Medical and Chirurgical Faculty of the State of Maryland, 1888.

Canfield, William Buckingham, A.M., M.D., Baltimore, Md. *The Gonococcus*. Reprint from the Microscope.

Mercer, A. Clifford, M.D., F.R.M.S., Syracuse, N. Y. *A Method of Using with Ease Objectives of Shortest Working Distance in the Clinical Study of Bacteria*. Reprint from the Microscope.

Michigan State Board of Health. *Prevention and Restriction of Small-Pox*. Reprint from the Annual Report of the Board for 1888.

Hewitt, Charles N., M.D., Red Wing, Minn. *Public Health a Public Duty. The Organization, Powers, and Relations of Local, State, and National Boards of Health. The President's Address at the Sixteenth Annual Meeting of the American Public Health Association, Milwaukee, Wis.*

Report of the Committee on the *Pollution of Water Supplies* appointed by the American Public Health Association. Read at the Annual Meeting at Milwaukee, Wis.

Carpenter, A. B., M.D., Cleveland, O. *Report on Progress in Gynecology*.

#### LETTERS RECEIVED.

J. M. Bessey, M.D., Toledo, O.; H. H. Peachy, M.D., Loveland, O.; Thos. F. Goode, Buffalo Lithia Springs, Va.; Parke, Davis & Co., Detroit, Mich.; Battle & Co. Chemists Corporation, St. Louis, Mo.; James H. Buckner, M.D., Cincinnati, O.; Chas. W. Hitchcock, M.D., Detroit, Mich.; J. M. Bell, M.D., Murphy, N. C.; Lam-

bert Pharmacal Co., St. Louis, Mo.; W. P. Cleary, New York; Jacob L. Williams, M.D., Boston, Mass.; W. B. Atkinson, M.D., Philadelphia, Pa.; Bouché Fils & Co., New York; R. Melms, M.D., Chicago; St. v. Martinitz, M.D., Cedar Rapids, Ia.; Fairchild Bros. & Foster, New York; Codman & Shurtleff, Boston, Mass.; Wm. Pepper, M.D., Philadelphia, Pa.; T. J. Kane, M.D., Paterson, N. J.; G. E. Francis, M.D., Worcester, Mass.; A. F. Sampson, M.D., Galveston, Tex.; G. N. Seidlitz, M.D., Keokuk, Ia.; R. S. Anderson, M.D., Grove City, Ill.; W. D. McGowan, M.D., Ligonier, Pa.; Wm. Manlius Smith, M.D., Syracuse, N. Y.; National Surgical Institute, Atlanta, Ga.; National Architects' Union, Philadelphia, Pa.; Ohio Buggy Co., Columbus, O.; J. J. Conner, M.D., Pana, Ill.; W. P. Cleary, New York; Dr. Sauerhering, New York; A. A. Marks, New York; A. L. Justice, M.D., El Paso, Tex.; McL. Miller, M.D., Oconomowoc, Wis.; Rumford Chemical Works, Providence, R. I.; Dr. Woodruff, London, Ont.; Overman Wheel Co., Boston, Mass.; J. H. Eskridge, M.D., Chicago; T. M. Talbot, M.D., Columbus, O.; Beatrice Pearce, M.D., Waukegan, Ill.; Charles T. Parkes, M.D., Chicago; S. Solis-Cohen, M.D., Philadelphia; E. R. Williard, M.D., Tiffin, O.; Hal. C. Wyman, M.D., Detroit, Mich.; J. W. Unger, M.D., West Point, Miss.; W. C. Jones, M.D., Grass Valley, Cal.; Wm. B. DeWees, M.D., Salina, Kas.; E. H. Dudley, M.D., Shell Rock, Ia.; E. F. Brush, M.D., Mt. Vernon, N. Y.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 9, 1889, to February 15, 1889.

The Medical Director will proceed to Ft. Buford, Dak., on public business connected with the Medical Department, and upon completion of duty will rejoin his station. Par. 8, S. O. 14, Hdqrs. Dept. of Dak., St. Paul, Minn., February 5, 1889.

Major Leonard W. Loring, Surgeon, leave of absence on surgeon's certificate of disability granted in S. O. 6, A. G. O., Dept. of Ariz., January 18, 1889, is extended six months on account of disability, by direction of the Secretary of War. Par. 23, S. O. 35, A. G. O., Washington, February 11, 1889.

Capt. Edgar A. Mearns, Asst. Surgeon, is relieved from temporary duty at Ft. Pembina, Dak., and will rejoin his station, Ft. Snelling, Minn., without delay. Par. 4, S. O. 14, Hdqrs. Dept. of Dak., St. Paul, Minn., February 5, 1889.

Capt. Henry S. Kilbourne, Asst. Surgeon, having complied with par. 2, S. O. 6, Dept. of the Columbia, will return to his station, Vancouver Bks., W. T. Par. 1, S. O. 9, Hdqrs. Div. of the Pacific, San Francisco, Cal., February 2, 1889.

By direction of the Secretary of War, Capt. Robert W. Shufeldt, Asst. Surgeon, having appeared before the Army Retiring Board at Ft. Leavenworth, Kan., in compliance with paragraph 1, S. O. 4, January 5, 1889, from this office, will repair to this city to await action on the proceedings in his case. Par. 12, S. O. 32, A. G. O., Washington, D. C., February 7, 1889.

#### Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending February 16, 1889.

Surgeon D. N. Bertolette, detached from the "Thetis" and wait orders.

P. A. Surgeon L. G. Henneberge, detached from "Minnesota" and to the "Thetis."

Surgeon R. A. Marmion, detached from "Juniata" and wait orders.

Asst. Surgeon F. N. Ogden, detached from "Juniata" and wait orders.

Asst. Surgeon Chas. F. Stokes, ordered to the "Minnesota."

Asst. Surgeon Geo. B. Wilson, ordered to the Navy Yard, Mare Island, Cal.

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## ORIGINAL ARTICLES.

### THE PREVENTION OF PUERPERAL FEVER.

*Read before the Chicago Medical Society, February 4, 1889.*

BY W. W. JAGGARD, M.D.,

PROFESSOR OF OBSTETRICS, CHICAGO MEDICAL COLLEGE; OBSTETRICIAN TO MERCY HOSPITAL.

The crowning glory of Semmelweiss' theory of puerperal fever, as aptly remarked by Kucher (Puerperal Convalescence and the Diseases of the Puerperal Period, p. 234. J. H. Vail & Co., New York, 1886) is the chapter on prevention. In the fifteen minutes allotted to this topic by the directors of the present discussion, it is possible only to give the briefest outlines of the subject.

The principles upon which the prevention of puerperal fever depends are few and very simple. As summarized by Credé (Gesunde und kranke Wöchnerinnen. Leipzig, 1886, p. 79) there are only two. They are: 1. Prevent, as far as possible, lesions of the genital tract. 2. Prevent the infection of the lesions that are inevitable.

Let us discuss each of these principles in detail.

1. Prevent, as far as possible, lesions of the genital tract. In every labor, no matter how ideally physiological it may be, there is always some solution of the continuity of the tissues that constitute the genital tract. What is the extent of the necessary puerperal wound? 1. The entire area of the endometrium that contributes to the formation of the decidua, inclusive of the placental site, must be regarded as a wound surface after labor. With the commencement of labor, the ovum is forced downward toward, and into the cervix, so that the mucous membrane begins to be deprived of its epithelium, as deeply as Friedländer's glandular stratum. In the commencement of labor, during labor, and during the early days of the lying-in period, until a new mucosa is formed, the intra-uterine expanse is easily accessible to the finger and to the air, and infection is liable to occur at any moment.

2. The neck of the uterus, particularly the os externum, is commonly torn to a greater or less degree, even in physiological labors. The epithelium lining the cervical canal and covering the vaginal portion is always rubbed off to a variable

extent by the passage of the fœtus, even in the absence of operative procedure.

3. The vaginal mucosa is apt to be denuded in some degree of its epithelium, by the friction of the passagers. Lacerations of the vulvar orifice and lower vagina are of such common occurrence that they are erroneously regarded by certain observers as necessary events.

The puerperal wound, thus marked out, cannot be prevented, but its limitation to these boundaries can be secured, in the large majority of normal cases, by attention to the following precautions:

1. Let the diagnosis of presentation and position, and of the stage of labor be made, as far as possible, by the methods of physical examination of the abdomen; inspection, *palpation*, percussion and auscultation. Limit to the 'minimum the number of digital examinations *per vaginam*. The adequacy of the methods of physical exploration of the abdomen, in the absence of all examinations by the vagina, has been fully established by the experience of Credé, Breisky, Litzmann, Halbertsma, Winckel, C. Braun and others. In our own country, Richardson, Mundé, Kucher, Neale, Hoag and others have repeatedly urged the value of these methods.

2. Let the bag of waters rupture spontaneously. The bag of waters and the presenting part—not the presenting part alone—is the physiological means by which the neck of the uterus is dilated. Dr. Henry T. Byford has ably written upon the important function of the bag of membranes in the dilatation of the vagina and vulvar orifice, and forcibly urges its maintenance in an intact state, after disappearance of the cervix, upon this ground. I have never been able to perceive any important action of the nature alleged, nor, on physical grounds, can I conceive such an effect in an important degree to be possible. Nevertheless, I am perfectly willing to accept Dr. Byford's ingenious conclusions, if this notion will influence practitioners to withhold from rupturing the membranes. The intact state of the bag of membranes must be preserved for at least two reasons: 1, to secure perfect dilatation of the cervix uteri; and 2, to prevent the access of air and other carriers of infection to the cavum uteri. This latter important office of the bag of membranes has recently received recognition from Goodell.

3. Preserve the perineum and vulvar orifice. Except in cases of congenital malformation, or infiltration of the tissues as the result of various diseases, the perineum and vulvar orifice can be preserved in every case, either by the plan of so-called support, or by the timely performance of episiotomy. This proposition many of you will not accept, but I must maintain it as a firm conviction, based upon sufficient personal observation and experience, and independent of the unanimous testimony of those whose opinion upon this point is responsible.

But if a laceration of the perineum does occur, or if episiotomy is done, unite the rent in the one case, or the incision in the other, immediately upon the conclusion of labor.

4. Refrain from all those meddlesome, injurious practices, that have for their object the abbreviation of the first stage of labor—such as digital dilatation of the cervix, the exhibition of ergot, even in small doses, and the like.

5. Deliver the placenta by the Dublin method, or by the same plan as it has been described by Credé. Inasmuch as the adequacy of this method has been called in question, within the last six months, by a member of this Society, that alleges an experience of over 2,500 cases in obstetrics, it may not be amiss to add that in 48,249 cases—Vienna General Hospital (Carl Braun. *Lehrb. d. g. Gynækologie*, Wien., 1881, p. 182) eleven years, 1862–1872—the expulsion of the placenta was effected by Credé's plan in 48,132 cases, or 99.8 per cent.; only in 117 cases, 0.2 per cent., or once in 500 cases, was it necessary to resort to other procedures.

Turn now to principle number two.

2. Prevent the infection of the lesions that are inevitable. Infection of lesions of the genital tract during or after labor occurs in one or other of two modes. 1, contact infection; second, indirect infection, so-called self-infection, or spontaneous infection (Fritsch). In the very large proportion of cases, the carrier of the infection is the finger of the accoucheur or nurse, their instruments, or the napkin, and the cases are examples of contact infection. Reflecting upon such cases, Emmet once drastically remarked, "Many a woman's death-warrant has been carried under the finger-nails of her physician." But the researches of Winckel and Ahlfeld tend to show that a woman may become the subject of puerperal fever without exposure to infection through vaginal examination. Alleged examples of the so-called auto,—self—or spontaneous infection are to be found in Winckel's cases of street labors, and Ahlfeld's cases, in which no vaginal examinations were permitted. Such cases are very rare. The experience of Leopold (*Deutsche Med. Wochenschrift*, No. 20, May 17, 1888) in particular, shows that in proportion as measures to prevent contact infection are faithfully carried out, just in that pro-

portion do these cases of so-called self-infection disappear. At the Dresden clinic, out of 1,387 cases of labor in 1887, and 1,388 in 1888, 248 cases were neither examined *per vaginam*, nor subjected to vaginal irrigation. In only five, or 2 per cent., were slight symptoms of fever developed. All these cases of so-called auto-infection are in reality examples of infection from without. They receive full explanation in the researches of Döderlein (*Arch. f. Gyn.*, 31 Bd., 3 Hft.) and Kaltenbach (*Volkman's Sammlung klin. Vortr.*, Nr. 295), and others. The secretions of the cervix and the vagina contain, under normal conditions, pathogenic and non-pathogenic germs, that may gain access to the cavum uteri, or may penetrate into lesions of the cervix and vagina, and cause local, followed by general infection.

In the prevention of the infection of the inevitable lesions of child-birth, it is necessary to bear clearly and distinctly in mind these two modalities, and to concentrate attention upon their elimination. At the present, the fear of the deleterious influence of the atmosphere has abated, just as in surgery (Kümmel. *Bedeutung der Luft und Contact-Infection für die pract. Chirurgie. Arch. f. Klin. Chirurg.*, 33 B. 3 H.) the scrupulous attention paid to the disinfection of the surrounding air in the early days of Lister has relaxed. The specific details observed in the prophylaxis of contact and so-called self-infection of the lesions incident to parturition, due allowance being made for the structural and functional peculiarities of the region, are strictly analogous to, if not identical with the precautions that every surgeon abreast of the times enjoins in the prevention of wound infection in all major and minor operations. The surgeon sterilizes the field of operation, the immediate environment, and everything that comes in contact with the wound; the obstetrician acts under the same principles.

The specific details are:

#### A. PRECAUTIONS OBSERVED BY THE ACCOUCHEUR • AND NURSE.

1. Sterilization of the hands; of all instruments and appliances, napkins, and the like, that are liable to be brought into contact with the genitalia. In the disinfection of the hands, it is necessary to bear in mind the vital significance of subungual dirt, of the exact surgical aspects of which Fürbringer (*Untersuchungen und Vorschritten über die Desinfektion der Hände des Arztes nebst Bemerkungen über der bakteriologischen Charakter des Nagelschmutzes*. Wiesbaden. Bergmann, 1887) has informed us. To sterilize the hands, it is necessary to wash them thoroughly in warm water with soap and a clean nail-brush, remove subungual accumulations and trim the nails with a knife; then dip the hands into an 80 per cent. solution of alcohol (Fürbringer); finally rinse the hands carefully in a solution of corro-



sive sublimate 1:1000. Make the examination before wiping the hands with a towel. In the disinfection of the hands it is well to include the disinfection of the forearm; it is absolutely obligatory in the event of any operative procedure, like version or the forceps operation. A lubricant can usually be dispensed with, although there is no objection to the use of a solution of corrosive sublimate in glycerine, 1:1000. Instruments can be effectually sterilized by being boiled in water for five minutes (Davidsohn). For washing the genitalia, cleaning wound surfaces, for napkins and the like, employ either sterilized absorbent cotton, or sterilized gauze, to the total exclusion of sponges. Pass the catheter, after cleansing the meatus urinarius, by sight, not by touch; use a glass instrument; keep it constantly immersed, when not in use, in a solution of corrosive sublimate in glycerine, 1:1000; you will thus avoid cystitis (Boxall, R.)

2. The important question, "How soon after exposure to sources of infection may the accoucheur or nurse resume the practice of obstetrics?" has received a very satisfactory answer in a paper by French of Minneapolis. Under exposure to sources of infection, be it remarked, we understand exposure to puerperal fever, erysipelas, diphtheria, scarlet fever, pus secreting wounds or surfaces, cadaveric emanations, menstrual and lochial discharges, and the like. In the paper mentioned, French collected the written opinions, of the leading surgeons and obstetricians, whose utterances were at all authoritative upon the point, in this and foreign lands. The weight of opinion was that the lapse of any definite period of time,—say twenty-four hours,—was not an essential condition to adequate disinfection. That a Turkish bath, a change of clothing, and the subsequent disinfection of the hands and forearms might render the individual surgically clean in a much briefer space of time.

#### B. PRECAUTIONS TO BE OBSERVED WITH REFERENCE TO THE PARTURIENT WOMAN.

1. Before the first examination per vaginam, and before all operative procedures that involve the introduction of the hand or instrument, it is necessary to sterilize as far as possible the pubic hair, vagina, and the accessible portion of the genital tract. Winter, (*Zeitschr. f. Geburtsh. u. Gynäk.*, Bd. xv, Heft. 2) as before remarked, and others have shown that under normal conditions, pathogenic microbes are present in the cervical and vaginal secretions of more than half of all cases; that they are present within the cavum uteri and tubes only when they have been introduced, as by the use of the sound. The possibility of so-called auto-infection is thus demonstrated, even in the absence of the evidence adduced by Ahlfeld, Winckel and others. The difficulty in the absolute sterilization

of the canal of the cervix uteri and the vagina is great, almost insurmountable. Steffek (*Zeitschr. f. Geburtsh. u. Gynäk.*, Bd. xv, 2 Heft.) concludes a very instructive series of experiments upon this point, in the following words: "A thorough washing out of the lower segment of the cervix and the vagina by the aid of two fingers, and subsequent careful irrigation, with one litre of sublimate solution (1:3000) or 3 per cent. carbolic acid solution every two hours is essential to the sterilization of the parturient passages." Experience, however, teaches that surgical cleanliness of the woman and relative sterility of the parturient canal may be secured:

a. By a full bath in warm or hot water, in which soap is freely applied about the pubic hair, and external genitalia, and

b. By thorough vaginal irrigation with sterilized water, or dilute solutions of sublimate or carbolic acid.

In conclusion upon this point let us bear in mind the fact that sterilization of the parturient passages is obligatory as well in the prevention of ophthalmia neonatorum, as in the prophylaxis of puerperal fever.

2. Let the hand follow the contracting uterus, when the head has passed the perineum, and remain upon the fundus until the placenta is expelled, and until retraction of the uterine musculature is secured. Of course, the placenta and membranes must be critically inspected as to their integrity. In case of retention of a bit of placenta,—normal or succenturiata,—the offending fragment must be removed. In case of retention of portions of the chorion or decidua, it is safer to trust to the uterus for its spontaneous expulsion. Small clots of blood, lurking in the cavum uteri, and loitering fragments of the membranes will do no harm, provided they have not been infected.

3. After the completion of labor wash the external genitalia and irrigate the vagina, to remove the detritus, and apply a sterilized napkin. Daily vaginal irrigation during the puerperium is strongly contraindicated in normal cases of labor. Let the external genitalia only, be washed during the lying-in-period.

4. The cavity of the uterus ought never to be irrigated after labor, except in the presence of a distinct indication. When the hand is introduced as in version, when the liquor amnii is discolored as in protracted labors, when the fetus is dead or macerated, this indication is presented. For the purpose of irrigation, use sterilized water: there is considerable danger of resorption from the use of carbolic acid or sublimate. To effect permanent disinfection of the cavum uteri, use either iodoform or salicylic acid alone or in combination. I give the formulæ as suggested by v. Mosetig-Morhoof in 1881, and by Ehrendorfer still later. (Emil Ehrendorfer, *Leitung der Geburt und des Wochenbettes nach antiseptischen Principen*.)

Iodoformi pulv. . . . .	20.0
Amyli . . . . .	20.0
Glycerine	
Gummi Arab. . . . .	āā 1.0
Ol. terebinth. . . . .	gtt. xx
M. f. bacilli Nr. sex.	
Acidi salicyl . . . . .	5.
Amyli.	
Glycerine	
Gummi Arab. . . . .	āā 1.0
Ol. ricini . . . . .	gtt. x
M. f. bacilli Nr. decem.	

(Schnitzler's Klinische Zeit- und Streitfragen, Wien., 1888.)

Now after disinfection of the cavum uteri by irrigation, and its permanent disinfection by iodoform or salicylic acid, *let the uterine cavity severely alone* for the entire period of the puerperium. More Madden writes in the paper on "Puerperal Fever," read before the last International Medical Congress, "From the first day after delivery until convalescence has taken place, the uterine cavity, as well as the vagina, should be daily washed out with water as hot as can well be tolerated." Such a notion of the prevention of infection is an example of irresponsible opinion, that needs no condemnatory comment. The procedure is barbarous and in utter opposition to the views and practice of those that speak and write with authority upon this subject.

5. It is an axiom in obstetrics that a firmly contracted uterus is well-nigh proof against infection. During the first two days of the puerperium gentle friction of the fundus uteri, twice daily aids materially in securing firm retraction of the uterine musculature, and does not at all interfere with the process of puerperal thrombosis. This practice originated in Carl Braun's clinic. It is more efficient than the use of ergot. Commonly, there is no objection to the use of this drug in addition.

#### C. PRECAUTIONS WITH REFERENCE TO THE ENVIRONMENTS.

As before remarked, no attempt is now made to disinfect the air. Delivery under the spray and in a tub of water,—a curious Russian device,—have passed into ancient history. The only condition in the environment that we demand is a clean bed, and clean linen; but these are not essential conditions provided the items, already mentioned, have been supplied. It would be better for the parturient woman, if the confinement room had no communication with the sewer, since vitiated air is unwholesome under all conditions of human life. But this is by no means an essential condition. As aptly remarked by Kucher, "I would be less frightened by the bursting of a sewer pipe during labor, than by the use of a suspicious sponge or an unclean rag on the external genitals."

Thus, very briefly I have tried to outline the principles and the practice of the prevention of

puerperal fever. To complete the subject of the prevention of puerperal infection, a word ought to be said on the prevention of the infection of the breasts,—mammary abscess,—and upon the prevention of the infection of the new-born; these topics, however, cannot be considered in the space of time at my command.

One word in conclusion. These rules are simple and easy of application as well in private, as in hospital practice; as well on South Halstead Street, as on Calumet Avenue. The evidence upon which they rest to-day is overwhelming, and amounts to absolute demonstration. The proposition that puerperal fever is in every case an example of infection through a lesion of the genital tract, is no longer offered tentatively for your criticism, but dogmatically for your acceptance. It is not within the scope of this paper to offer statistical proof, but if there be a doubting Thomas present, and if he be a sincere, honest seeker after truth, let him look for such figures in the books, for they are there.

#### A. CASE OF ALCOHOL AND TOBACCO AMBLYOPIA; WITH REMARKS.

Read before the Fort Wayne Academy of Medicine, December 6, 1888.

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On September 29, 1887, a gentleman, D. S. by name, æt. 50, consulted me for a defect in his eyesight. He said that for six months his sight had been growing dim, which necessitated a frequent change in his spectacles; that he had tried glasses at all the shops in town where they were for sale, but could not find any with which he could see to read. He then consulted me on the advice of his physician, as the patient thought the eyelids were at fault. He had no pain about his eyes and his general health was good as usual.

On inspection the eyelids showed some slight conjunctivitis of a chronic character, but not sufficient to account for the visual defect. A functional examination showed that his vision for distance was reduced to  $\frac{1}{10}$  in either eye, with a greater defect in the left. He could not read Jaeger No. 16 or 2-line great primer with either eye. T. normal; field perfect; ophthalmoscopic examination showed discs white both on temporal and nasal side, with large physiological excavation. No nutrient vessels on disc. The terminal branches of the retinal artery reduced somewhat in both eyes below what I thought might be considered the normal calibre. The veins did not seem to me to be materially reduced. No loss of sensation in the color perception. Patient distinguishes colors by name and assortments accurately. Recognizing that the optic nerve was undergoing atrophic changes I asked him if he smoked much,

and he said that he used twelve or fifteen cigars daily or their equivalent in pipe tobacco. I then asked him if he used intoxicants to any extent, and he replied that he took a glass of beer occasionally. Knowing, however, the patient's habits, the latter remark was taken with a large grain of allowance, and the equivalent of one gallon of beer was allowed as a margin upon which daily calculations might be based. Being satisfied that alcohol and tobacco were the causes of the changes observed, strict abstinence was enjoined, and hypodermic injections of strychnia sulphas, gr.  $\frac{1}{60}$ , were made into the back twice daily. At the same time bromide of potassium and iodide of potassium, of each 10 grs., was ordered to be taken three times daily.

On October 4 the sight had increased to  $\frac{2}{20}$ , and Jaeger No. 14 or great primer could be read with glasses which corrected his presbyopia. The treatment of hypodermic injections was continued till November 4, when the patient's sight for distance was  $\frac{2}{20}$  + or above normal; that is, he could read at the distance of 20 ft. what the normal emmetropic eye should read at 20 ft., and most of the next lower line, which should be read by the normal emmetropic eye at 15 ft. As to near vision he could read Jaeger No. 1 or diamond type at 15 inches with the glasses that corrected his presbyopia. After about two weeks of treatment with hypodermic injections of the strength of gr.  $\frac{1}{60}$ , I began using the strychnia of the strength of gr.  $\frac{1}{30}$ , which was gradually increased to gr.  $\frac{1}{15}$ .

Since November 4 no strychnia has been employed, but potass. iod. alone in 10 gr. doses was continued.

November 10 patient's vision much the same as on November 4. Have watched patient closely, and am convinced that he has taken no alcoholic drinks and smoked no tobacco. There was no limitation in the field and no color scolomata. It is right to say that patient cannot read readily type smaller than Jaeger No. 4 or minion, because he is unable to see accurately the beginning letter of each word, and must turn his head in different positions to catch the succeeding word when the letters are very small. Pupils respond naturally to light.

The first question, perhaps, which will be asked in regard to this paper is, How do you know that the changes in the optic nerve are due to alcohol and tobacco, and is there anything characteristic in the disc that would show alcohol and tobacco to have caused the peculiarity? I answer that there is nothing distinctive in alcoholic and tobacco amblyopia with consecutive atrophy that enables one to make the diagnosis upon ophthalmoscopic appearances alone. An atrophy of the optic nerve may have followed choked disc or tumor at the base of the brain. If the atrophy have followed choked disc, and the case be seen not too long after the inflammation begins to subside, we

will first of all notice that the disc is not well defined, the edges of the circle will not appear as clean cut, but will be frayed a little, and the vessels of the disc will shade over into the tissue of the retina. The arteries will be thread-like, or at least very much attenuated, and the veins distended and tortuous, showing that the return circulation is interfered with. While the connective tissue becomes very much thickened, there is an effusion into the surrounding tissue, which makes the disc very hazy. Vision is usually reduced to a great extent, yet perfect vision may be retained in the early stages of the disease. As the inflammation subsides the disc assumes a creamy tint, the mistiness due to the effusion passes away, and the whitened papilla seems to lie on a plane with the surrounding retina. The later features, then, characteristic of choked disc are illy defined circumference of the disc; tortuosity of veins to a greater or less extent; and pale creamy tint of the papilla.

The disease, when of central origin, is bilateral, and usually both eyes become involved about the same time; or the inception of the trouble in the one eye is followed very shortly by the affection of the other eye. When the cause is within the orbit, of course the neuritis is confined to this side. The onset of the trouble is usually rapid, and a few hours or days may be sufficient to render the patient quite blind. The field of vision is generally affected more or less, and in such cases a certain amount of atrophy may be expected to follow. The state of the pupil depends greatly upon the acuity of vision. When this is not greatly impaired the pupil responds readily, and is of normal size. The pupil may be widely dilated, and quite immovable. Bright subjective lights are usually complained of, and always cause much annoyance and complaint in a sensitive patient. If the patient have much pain of a severe character in the head, and radiating all over the cranium, we may suspect the trouble to be of central origin. Loss of memory, vomiting, epileptoid seizures, giddiness, loss of taste or of hearing, point to the brain as the cause of the trouble. In the large majority of cases of choked disc the origin may be located in the brain.

Absence of all the foregoing symptoms, together with exclusion of orbital tumors, does not imply that we have not to do with an interference with return circulation. Tumors of the brain account for most cases of choked disc, and when the brain trouble is chronic, double choked disc almost always means brain tumor or basilar meningitis with exudation. Complete recovery with good sight does not prove that the gross changes in the brain are not still present. And the fact that we may have optic neuritis without headache and vomiting makes the diagnosis of the cause very perplexing when seen late.

As a rule, optic neuritis ends in complete atro-

phy of the optic nerve and loss of sight; hence the majority of these cases are very doubtful as to the result.

Progressive atrophy of the optic nerve, when seen early, may show some hyperæmia of the disc; but this cannot be asserted positively, since the color of the papilla varies much in normal eyes. Progressive atrophy is characterized by pale, white, or bluish-white discoloration of the papilla, diminution in the calibre and number of the nutrient vessels on the disc, attenuation of the retinal veins and arteries, more especially the arteries, and frequently a peculiar excavation of the nerve. Sometimes the whiteness of the disc is complete and smooth like paper, and again there is a green or bluish cast to the reflection. The circumference of the disc is well defined and sharply cut, as though done with a punch; or the circumference may be a little irregular, yet always clean cut.

In amaurosis of spinal origin the disc is usually green or bluish-green, and by some authors this is regarded as almost pathognomonic. In progressive atrophy the retinal vessels are thread-like and very few; they are short and cannot be followed far on to the retina. Contraction of the field of vision is an important element in progressive atrophy. When contraction of the field has become marked in one eye, and the other eye shows contraction at the same place, we have very positive proof of progressive atrophy.

The causes of progressive atrophy may be found in meningitis, acute and chronic, periostitis and tumors. Locomotor ataxy and chronic myelitis furnish a certain percentage of cases of progressive atrophy. I recall one case of locomotor ataxy that showed beginning atrophy as the first recognized symptom of the major trouble. The eye affection is usually a late manifestation of the spinal trouble, however. Again, loss of vision in locomotor ataxy may be due to paresis of accommodation with no disease whatever of the optic nerve. According to Graefe 30 per cent. of cases of progressive atrophy are due to spinal disease.

If the atrophic process has been going on for some time the prognosis must be very guarded, and the state of the field of vision must be our guide. When the field is affected in both eyes the disease will, in all probability, progress to complete blindness. The interruption in the progress of the unfavorable cases is not long. When the atrophy cannot be traced to any definite cause the prognosis is unfavorable. In those cases in which the field is normal, even though the trouble has existed for some months, and the acuity of vision fallen to one-tenth or one-sixth, we may regard the disease as not due to progressive atrophy, says Wells. He further says that in these cases the vision may not improve.

Upon the history of this case as it is presented, and in consideration of the foregoing, the diagno-

sis of amblyopia potatorum was made, and in my opinion tobacco also formed an element in the causation. Mr. Hutchinson says in a paper on the subject of "Tobacco Amaurosis." "The cases which form the subject of this paper are recognized by the loss of blood supply to the optic nerve itself. There is usually not much diminution of the size of the vessels which supply the retina, and often these remain of good size, while the nerve itself is as white as paper. The first stage (one which is usually very transitory, and perhaps often altogether omitted) is one of congestion, during which the disc is too red. Then follows pallor of the outer half of the nerve disc, that part which is nearest the yellow spot. During the stages the patient complains merely of dimness of vision. Everything seems in a fog to him, but he has no pain in the eyes, nor any photophobia or photopsia. In the later stages the whole optic disc has become pale even to blue-milk whiteness; and later still there is proof not only of anæmia of the nerve, but of advanced atrophy. The stages generally occupy from four months to a year. In many cases the patient becomes at length absolutely blind; but in others the disease, having advanced to a certain point, is arrested. There is from first to last no evidence of disease in any structure of the eye-ball, excepting the optic nerve, and even after years of absolute blindness the retina and choroid remain healthy and their blood-supply good."

Romiée regards weakening of accommodation as the first sign of chronic alcoholism. The diminution of sight to one-sixth or below occurring within a limited period of time and simultaneously in both eyes he regards as pathognomonic of alcoholic amblyopia. The nature of the affection he considers to be a diffuse interstitial sclerosis of the neuroglia of the nerve fibres originating in the nerve centres. In the few cases of this kind which have been examined microscopically, the nerve fibres were found the seat of fatty degeneration, and the connective tissue frame-work was hypertrophied. The disease is always bilateral, and in severe cases the patient often complains of persistent colored after-images.

Dr. Alt, of St. Louis, has reported 120 cases of anæmic and atrophic conditions of the optic nerve and retina, which I have made some attempt to analyze. As Dr. Alt says that he had at one time abandoned the use of strychnia in these cases, but upon subsequent trial had resumed its use, many cases were seen but once, which no doubt received a very doubtful prognosis, and were turned away without treatment. Therefore the possibilities that treatment might have offered can not be known. Of the 120 cases there are charged to alcohol and tobacco, 34; alcohol alone, 3; tobacco alone, 7; total, 44, or 36 per cent. As to the time of life during which the noxious influence of tobacco and alcohol seem to be most potent,

the following will give some account: Alcohol and tobacco caused the trouble between 20-30, 5; between 30-40, 9; between 40-50, 15; between 50-60, 10; between 60-70, 1. In seven cases tobacco alone was the cause, and the ages are disposed as follows: Between 20-30, 1; between 30-40, 2; between 40-50, 1; between 50-60, 3. Alcohol alone was responsible in three cases, whose ages range as follows: Between 50-60, 1. between 60-70, 1; between 70-80, 1.

Of those cases in which mention is made of the color-sense, it was impaired in cases of alcohol and tobacco 11 times; tobacco alone, 3 times.

The color-sense usually impaired is that for red and green, as the following will show: Alcohol and tobacco, red 1, red-green 2, green 3, no color-sense 1. In tobacco alone the color-sense was lost for green and red-green. In alcohol and tobacco the field of vision was contracted in 9 cases.

No. 1. Visual field, concentric limitation; acuity, R.,  $\frac{1}{200}$ , L.,  $\frac{6}{200}$ ; treatment, ars., pot. iod., strychn.; time, 6 weeks; result, none.

No. 3. Visual field, central scotoma; acuity,  $\frac{2}{70}$ , both; treatment, pot. iodide; time, 2 weeks; result, does not change.

No. 4. Visual field, yellow-blind; acuity,  $\frac{6}{200}$ ,  $\frac{2}{200}$ ; treatment, pot. iod.; time, 4 weeks; result,  $\frac{7}{200}$ ,  $\frac{2}{200}$ .

No. 9. Visual field, green-blind, central scotoma; acuity,  $\frac{2}{100}$ ,  $\frac{2}{200}$ ; treatment, pot. iod.; time, 1 year; result, color restored,  $\frac{3}{200}$ ,  $\frac{2}{200}$ .

No. 11. Visual field, green-blind, restricted down and in; acuity,  $\frac{1}{200}$ ,  $\frac{1}{100}$ ; treatment, abst.; time, 2 months; result, none.

No. 12. Visual field, yellow-blind, concent. limited; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, pot. iod.; time, 2 months; result,  $\frac{2}{200}$  u.

No. 15. Visual field, limited downward and cent. scot., both; acuity,  $\frac{1}{200}$  u.; treatment, strychn. pot. iod.; time 18 months; result, blind.

No. 17. Visual field, restricted inward, central scotoma; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, pot. iod.; time, 6 weeks; result,  $\frac{2}{200}$  u.

No. 19. Visual field, limited concent. and central scotoma; acuity,  $\frac{1}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn., pot. iod.; time, 4 months; result,  $\frac{1}{200}$  L.

No. 27. Visual field, color sense impaired; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn.; time, 1 year; result, none.

No. 28. Visual field, restricted in and down in both; acuity,  $\frac{2}{200}$ ,  $\frac{1}{200}$ ; treatment, strychn., pot. iod.; time, 2 months; result,  $\frac{2}{200}$  u. Improved when strychnine was used.

No. 31. Visual field, restricted downward and in, central scotoma; acuity,  $\frac{2}{200}$ ,  $\frac{1}{200}$ ; treatment, strychn.; time, 6 months; result, none.

No. 35. Visual field, R., cent. inward and down, L., normal; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn.; time, 6 weeks; result,  $\frac{1}{200}$ ,  $\frac{2}{200}$ . Never drinks.

No. 52. Acuity,  $\frac{1}{200}$ ,  $\frac{1}{200}$ ; treatment, pot. iod., strychn.; time, 7 months; result,  $\frac{2}{200}$ ,  $\frac{1}{200}$ .

No. 53. Visual field, central scotoma; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn.; seen once. Saloon keeper.

No. 66. Acuity,  $\frac{2}{200}$ ,  $\frac{2}{100}$ ; treatment, strychn.; time, 2 months; result,  $\frac{2}{200}$ ,  $\frac{2}{200}$ .

No. 71. Visual field, central scotoma; acuity,  $\frac{2}{200}$  u.; treatment, strychn.; time, 2 mos.; result,  $\frac{2}{200}$  u.; never drinks.

No. 81. Visual field, central scotoma; acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, pot. iod., strychn.; time, 2 months; result,  $\frac{2}{200}$ ,  $\frac{2}{200}$ .

No. 84. Visual field, central scot.; acuity,  $\frac{2}{200}$  u.; treatment, pot. iod., strychn.; time, 3 months; result,  $\frac{2}{200}$  u.

No. 94. Visual field, central scot.; acuity,  $\frac{1}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn.; time, 2 mos.; result,  $\frac{2}{200}$  u.

No. 104. Visual field, central scot., R.; acuity,  $\frac{2}{200}$ ,  $\frac{1}{200}$ ; treatment, strychn.; time, 6 weeks; result,  $\frac{2}{200}$ ,  $\frac{1}{200}$ .

No. 105. Visual field, con. limited, cent. scot.; acuity,  $\frac{1}{200}$  u.; treatment, strychn.; time, 3 weeks; result,  $\frac{2}{200}$  u.

No. 106. Visual field, red-green blind, central scot.; acuity,  $\frac{1}{200}$  u.; treatment, strychn.; time, 8 months; result,  $\frac{2}{200}$  u.

No. 107. Acuity,  $\frac{2}{200}$ ,  $\frac{2}{200}$ ; treatment, strychn.; time, 3 months; result,  $\frac{2}{200}$  u.

No. 108. Visual field, central scotoma; acuity,  $\frac{2}{200}$  (?) u.; treatment, strychn.; time, 10 days; result,  $\frac{2}{200}$  u.

There are a number of cases in this report in which the patient was seen but once, and as the result of whatever treatment instituted was not reported, I have thrown them out altogether. In some cases there was spinal trouble also, and injuries and central troubles, so all such cases were eliminated from my report.

## A PRECISE METHOD OF EXCISION OF CLAVICLE, SCAPULA AND HUMERUS.

Read before the Chicago Medical Society, January 21, 1889.

BY CHARLES T. PARKES, M.D.,

PROFESSOR OF SURGERY, RUSH MEDICAL COLLEGE, ATTENDING SURGEON TO THE PRESBYTERIAN HOSPITAL, CHICAGO, ILL.

I am induced to present this case to you this evening both because of the rarity of such cases, and because it affords a very good example of the recovery of the human body from terrible injury. I will at the same time show you the specimen, which displays the disease *in situ*, and the amount of affection there was present.

Before doing this operation I, unfortunately, had not inquired very carefully into the subject; had not read much about it, and hence did not know much of the history of the operation, nor the circumstances under which it was adopted. But I have since been enabled to collect a little history of this operation, and will read what I have collected, mainly an abstract from a paper

read before a society in Berlin by Professor Adelman. These cases come to the attention of the surgeon under three circumstances: first, the operation is done for the surgeon by machinery or some accident previous to the patient coming under his charge; second, the surgeon does a series of operations, removing first one part of the member, then another part, and finally a third or fourth part, until the patient dies of recurrence; and third, the primary removal of the entire extremity as soon as the disease is recognized—the heading under which this case will be placed.

Professor Adelman addressed the Surgical Society of Berlin, June 4, 1888, concerning the operation for the removal of the upper extremity, together with the scapula and a part or whole of the clavicle. His address contains the history of the operation, placing the date of the first reported case at 1808. The operation was next performed, between 1830 and 1840, five times; between 1840 and 1850, five times; during the next decade, three times; during the next, seventeen times; during the next, thirteen times; and since 1880, twenty-six times; making in all 70 reported cases.

He discusses the statistics of Paul Berger, comprising 51 cases, and his method of operation. Adelman makes three classes: (1) cases in which the operation was performed after traumatism; (2) cases in which the operation was performed for benignant tumors; (3) cases in which the operation was performed for malignant tumors.

In the first class are 14 cases with 9 recoveries; in the second class, 3 cases with 3 recoveries; in the third class, 50 cases with 24 recoveries. This third class is subdivided into *sarcomata*, of which there were 26; *enchondromata*, 7; encephaloid tumors, 4; the remaining number bearing different names in different languages.

Of the 50 cases with malignant tumor, in 25 the entire operation was completed at one sitting; among these 25 cases there were 10 recoveries. Of the 25 cases having more than one operation each, 19 cases were operated in two sittings with 10 recoveries, 4 cases had three operations each with 3 recoveries. Of 2 cases with six operations each 1 recovered. These recoveries apply simply to the operation itself; deaths from recurrence after healing of the wound are not counted in the statistics. Among the 25 cases in which several operations were performed there are 17 in which the arm was primarily removed, but having recurrence it was found necessary to remove the scapula and clavicle. Professor Adelman remarks that this should induce us in the future to perform the entire operation at once, as these cases were all seen early, and the chances for radical cure must necessarily have been good. As it was, only 5 of all these 25 cases remained free from recurrence for years after—one

after 30 years, one after 20 years, two after 6 years, and one after 3 years.

In the 15 cases of death after one operation, 7 cases were due to the operation or to the low condition of the patient at the time of operation; 2 to shock; 3 to hæmorrhage; 1 to gangrene of the flaps; 1 to purulent pleuritis; and 1 to secondary hæmorrhage.

In 8 further cases in which the wound was entirely or almost entirely healed, the patient died from recurrence, five times in the lungs, the time of recurrence varying from three years to four months after the operation. In view of the frequent occurrence of secondary tumors in the lungs, the author advises careful examination of this organ, and considers an evidence of the presence of tumors in the lungs as a contra-indication for operation. The percentage of recoveries from this operation for malignant tumor is a little less than 50. Many methods of operation have been adopted by the different operators, but the plan of ligating both the subclavian artery and vein primarily seems to be advisable.

I will show the case as rapidly as possible, in order to let the patient get out of the room. You see the wound is healed, except this one spot of granulations. The boy, from his general appearance, is much healthier and stronger than previous to the operation. You will notice that there are quite a number of little pleats here, as if the sawing had not been very well done; there is apparently a superabundance of flap at the upper part which might have been used to close this gap of ulceration. This resulted because I had not a plan in view before the operation and made my flaps a little too redundant, so that when the lower flap was brought in contact with the upper one its fullness caused the foldings during apposition.

This case came before the clinic at Rush Medical College; a boy much reduced from pain, displaying merely an enlargement of the upper end of the humerus, implicating the shoulder-joint. The growth surrounded the bone, but was not uniform in development. Manipulation showed seeming fluctuation, both on the anterior and posterior aspect of the tumor, so much so that friends who sent him supposed that to open an abscess would be all that was necessary. But the appearance of the patient and the general aspect of the tumor rendered me suspicious, and, therefore, I introduced an exploring needle; instead of pus, I got only blood. The exploring needle went through the soft tissues to the bone, calling attention to the fact that there was not only implication of the soft part, but also disease of the bone itself. It seemed evident that it was a case of *sarcoma* of the shoulder-joint itself, probably commencing in the capsule and passing from it to the tissues around it, and that it would be very likely to recur after amputation, or other



simpler operation upon the shoulder-joint. I explained to the father that as it was a malignant tumor the only thing that seemed to me feasible was the complete removal of the shoulder. He consented to the operation.

From the report I have read you will understand that the immediate danger of the operation is hæmorrhage. There is another danger—the introduction of air into the veins as they are divided. In all operations about the large vessels of the neck or axillary space, where the veins are apt to be patulous, there is a source of anxiety to the surgeon from this cause. To overcome these immediate dangers, primarily to any incision for amputation, the circulation must be controlled by ligation of the subclavian artery and vein. This vein contains a large mass of blood and if divided without control of it much blood is lost aside from the danger of the introduction of air. Not having seen the reports of Paul Berger's method, I proceeded with this idea in view, and made the first incision above the clavicle, uncovering the subclavian artery, which was ligated close up to the side of the *scalenus anticus* muscle. The incision was then carried directly over to the top of the shoulder, the same as for amputation at the shoulder-joint. This incision was prolonged to the axillary space and along the line of the axillary border of the scapula. As soon as the axilla was opened the pectoralis major and minor muscles were divided and the axillary vein was included between two hæmostatic forceps and divided—the main trunks of the brachial plexus were then divided. The arm was then drawn over the front of the body and this incision adopted for excision of the scapula—following the spine of the scapula, so that the posterior flap was divided into two portions. These two flaps were dissected off until the posterior part of the scapula was uncovered; raising it from the chest wall, the muscles were divided and the extremity removed. All bleeding points, together with the axillary vein were now ligated and the flaps united.

This operation was not made upon any specific plan. Following the suggestion of Mr. May, who, in the last issue of the *Annals of Surgery*, reports two cases of this operation, I have looked through all the books in my library and have not found any specific method given. It remained for Paul Berger to give a plan for it. He was led to the plan he suggests after several trials upon the cadaver. The quickest and easiest method of doing the operation and securing the blood-vessels is according to his plan of procedure. He makes his first incision from the inner extremity of the clavicle outward to the top of the shoulder, immediately uncovers the clavicle and turns it out of the way; this leaves the subclavian vessels exposed so that they are easily secured. You all remember well as a result of past experience

that as the front of the axillary space is uncovered there is always to be seen a ridge across it produced by the raising of loose tissue upon the external thoracic nerve. It is easily found, and I call attention to it because passing outwards this nerve leads directly to the interval between the artery and vein, and hence to them. With the clavicle out of the way the vessels are superficially situated, easily isolated and free from diverging branches. The artery should be tied in two places, an inch apart, and divided; and the vein also; then the circulation is absolutely under control. May advises that just before the vein is tied the arm should be elevated for a few minutes to allow the venous blood to drain from it, thus saving as much blood as possible for the patient. In my second case I applied the Esmarch bandage up to the axilla. As soon as the arteries are secured in this position, by a rapid cut with the scissors, the brachial plexus can be divided and the pectoralis major and minor be severed.

The flap portion of the operation is done in this way: Commence at the center of the anterior incision and carry the knife directly across the anterior part of the axilla and inner arm to the lower angle of the scapula; then from the outer edge of the incision, posteriorly, carry the knife behind the joint to the same point; rapidly reflect the posterior flap; then all the muscular attachments should be divided and the extremity removed without any trouble. This gives a perfectly even anterior and posterior flap, coming together easily and nicely, and avoids the unseemly appearance of the anterior part of this wound which was caused by the too redundant anterior flap.

This operation was done six weeks ago, and after the first few days there was no time when we felt particularly anxious about the patient's recovery. The patient's perfect recovery has been interfered with by an accident, the effect of which you notice, the sloughing of the flaps, leaving this ulcer. In dissecting up the flaps one is compelled to keep close to the surface, diminishing greatly the nourishment of this immense piece of skin. The danger is increased if the post-scapular artery is wounded; so it is necessary to bear in mind the direction of these incisions in order to secure as neat a stump as possible.

Prof. Adelman's goes on to show that an artificial extremity can be applied to these cases, which overcomes the lack of symmetry, and which can also be made quite useful.

The second case came in about two weeks after this first, demonstrating the assertion that all cases come in couples. A man 37 years old came in one afternoon, with a tumor on the top of his shoulder, occupying the situation of the supraspinous fossa. It had all the indications, so far as external appearances, of a fatty tumor. A surgeon in charge of a clinic labors under this

disadvantage in all his cases; he has no opportunity for previous examinations, and hence is apt to go into a case without as complete an examination as it is entitled to. This tumor was examined hastily and the history hastily passed over, and the suggestion made that, in all probability, it was not a fatty tumor but, from the rapidity of its growth, would prove to be malignant, and that it was connected with the superficial tissues of the spinous fossa. As soon as the incision was made and it was exposed we saw the mistake. It proved to be a tumor that grew primarily from the shoulder-joint, and particularly from some part of the capsular ligament, crowding out from beneath the supra-spinous fossa and developing as large as a cocoa-nut upon the man's shoulder. The man had not consented to so radical an operation as entire ablation of the upper extremity, so only a temporizing operation was done; the removal of the tumor so far as external manifestations were concerned. He afterward had the nature of the growth explained to him and, after consulting with his friends, decided, in about three weeks, to submit to the operation. It was done; but he died fifty-six hours after the operation. He was slightly shocked by the operation, but recovered from that and for twenty-four hours was quite well, with only a slight elevation of temperature and pulse; he was then taken with delirium and died in a comatose condition.

I do not know exactly what was the cause of death, but I am inclined to think that it was poor policy to do this severe operation so soon after the primary interference. The man was still depressed and in great fear of the severity of the second operation. All these facts were against him. In this case the operation, after the method I have described as advocated by Paul Berger, I am sure was more quickly done, and with more satisfaction to the operator and, if he had lived, to the patient.

This second case properly comes under the head of secondary operations.

It is quite noticeable from the report read that the cases done by machinery are all reported as recovering, and it is questionable whether they have a place at all in the classification of this operation; because the deaths after such accident are not reported at all.

## THE PRESENT STATUS OF BACTERIOLOGY.

BY GEORGE MINGES, M.D.,  
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From the time of the first discovery of bacteria by Leeuwenhoeck during his examinations of saliva in 1675, bacteriology made no progress until about the middle of the present century, when Ehrenberg described several varieties of microorganisms, and Cohn, recognizing in these

minute beings the lowest forms of the vegetable kingdom, classified them into bacilli, micrococci, and spirilla.

Although Pollender, in 1849, described fine rod-like formations as occurring in the blood of animals dead of anthrax, to Davaine (1863) belongs the honor of having first proven the causal connection of these bacteria with the disease, and we must therefore recognize in the latter the first discoverer of a pathogenetic microorganism. Then followed the well-known experiments of Pasteur and his school on anthrax and chicken-cholera, but still the advances of this new science were slow.

Bacteria had now been discovered in the blood and secretions of diseased animals, but they could not be demonstrated in the organs. Well-planned experiments had determined the exact conditions favorable or otherwise to the development of these minute organisms, and the wonderful resisting power of the spores had been demonstrated. The harmlessness of the diseased blood when the bacteria had been removed by filtration was known. Cultures had even been made, but it was almost impossible to prevent unwished-for guests from entering the test-tubes and contaminating their contents. The hay-bacillus was known, but with the imperfect methods then in use, it was difficult to distinguish it from the anthrax-bacillus, and hence arose the false and dangerous doctrine of the transformation of species, which caused good observers to teach that the former, perfectly innocuous though it is, could, under certain conditions, take on the virulent properties of the latter.

These difficulties were dissipated almost at one stroke when the wonderful genius of Robert Koch popularized the use of the homogeneous immersion, when it gave us his improved methods of isolated staining of bacteria in the tissues, when it pointed out the correct way of using the Abbé condenser to wipe out the "structure-picture," and bring into bold relief the "color-picture" when it devised the solid culture-media, the boiled potato, the meat-peptone-gelatine, the agar-agar, the blood-serum. Now we can take a fluid containing a dozen different varieties of microbes, plate it out, so that as many different kinds of colonies spring up peacefully side by side, each containing only one kind of bacteria, and finally we can transplant a colony of each kind into a separate test-tube, where it will develop into a pure culture, and we can then study at leisure its distinguishing characteristics as to rapidity of growth, shape of colony, demand for or abhorrence of oxygen, formation of gas, color, odor, liquefaction of gelatine, etc., and when we inoculate an animal with such a culture, we know that we are experimenting with only one kind of microorganism. Can we help admiring that rare combination of brilliant genius, impartial self-criticism, and unerring judgment,

which has thus far always allowed Koch to triumph over his opponents?

We now know that the theory prevalent only a few years ago, that bacteria occurred everywhere, even in the normal blood and secretions, was erroneous. Only in those cavities of the body which communicate with the external air do they occur under normal circumstances. The mouth, nose, intestinal tract, vagina, contain them in great abundance, but the uterus and bladder are free. Even in the puerperal state, when there is no fever and the hand or instruments have not been introduced into the uterine cavity, no bacteria are found above the internal os. Wherever there is decomposition, bacteria are found, but in dry gangrene, when there is no wound to admit them, they are absent in the dead member.

Now as to the pathogenetic bacteria, Koch demands a microorganism to fulfill the following three conditions before it can be with certainty recognized as the cause of a disease: 1. It must always occur in that disease; 2. It must be found in no other disease; 3. Inoculations with pure cultures must always produce that disease. In certain affections of the lower animals, these three conditions are fulfilled, as for example, anthrax, chicken-cholera, malignant œdema, septicæmia of mice, septicæmia of rabbits. It is different with the infectious diseases of our own race. But few of our contagious maladies are transmissible to the lower animals, and experiments upon man cannot often be made.

Among the infectious maladies common to man and the lower animals are wool-sorters' or rag-picker's disease and tuberculosis. The former is identical with the anthrax of the herds and occurs among those who handle cattle or their products, such as butchers, drovers, wool-sorters, tanners, comb-makers, etc.

Tuberculosis is very common among our domestic animals, cows, horses, rabbits, guinea-pigs, cats, and may also occur in fowl, but rarely in dogs or goats. The cause of this disease has been demonstrated with almost as much certainty as Euclid's celebrated "*pons asinorum*." Koch's original culture of 1882, has been inoculated from tube to tube, so that last year it had reached the 82d generation, and this last culture, which could not contain a trace of the original caseous matter, was just as virulent to animals as the first. We may not hope to realize the sanguine hopes of enthusiasts of finding a remedy which is a potent poison to the bacilli, and at the same time innocuous to their host; but the discovery of the bacillus tuberculosis is of importance in the diagnosis and the prophylaxis of the disease. "Without bacilli no tuberculosis." The writer has himself been able to diagnose tuberculosis from examination of the sputa when physical signs were still negative; and we can all appreciate the importance of recognizing the disease in

its earliest stages. This discovery has also demonstrated the identity of tuberculosis in man, cattle, the ape, the fowl, the guinea-pig, the rabbit, although the gross pathological changes are alike in no two of the animals mentioned. Although on account of the great diffusion of this dread scourge in the animal kingdom, we can never hope to totally eradicate it, we can, nevertheless, by destroying the bacilli contained in the sputa with boiling water, by boiling all cow's milk, by making it a penal offense to sell infected meat, by killing all tuberculous cats, fowl, etc., restrict its ravages to a minimum. The experiments of Cornet show that infection with tuberculous sputa could generally be avoided with ordinary care. In almost 400 inoculations with the dust of rooms inhabited by tuberculous patients, he found that when patients expectorated only into vessels, the dust was harmless, while when the sputa were also deposited in handkerchiefs and upon the floor, the dust of remote parts of the chamber contained dried bacilli, and killed the animals.

In 1883 Koch described a comma bacillus which, in its relations to Asiatic cholera, fulfilled the first two conditions demanded by the discoverer. Then there arose a powerful opposition. It was urged that the bacilli never occurred in the blood, while the symptoms of the disease pointed to a grave systemic affection. Koch's explanation was that the constitutional symptoms were due to the absorption of a strong poison secreted by the bacteria. After numerous experiments Koch succeeded in rendering guinea-pigs susceptible to the comma bacilli by neutralizing the gastric juice with alkalis and restricting the peristaltic action of the bowels with opiates. For the last link in the chain of evidence, the experiment on man, we are indebted to the carelessness of one of Koch's pupils, who, while working with cultures of the comma bacillus, contracted the disease. But even those who still doubt that Koch has found the actual cause of cholera, must admit that, since the discovery of the comma bacillus, the ravages of the dread scourge have been limited in Europe to Spain and Italy, while the more intelligent nations bordering right on these countries, and which before had always been involved in the epidemics, have escaped.

Among the bacteria to which we can ascribe pathogenetic properties with great probability are the spirochæta of recurrent fever, discovered by Obermaier; the gonococcus of Neiser, and Eberth's typhoid bacillus. All these fulfil Koch's first two conditions, but the first cannot be cultivated in our present media, the second only in human blood-serum, and the last, although easily cultivated, does not readily affect the lower animals. The diagnostic value of the gonococcus has often been proven, and the writer has been able by microscopic examination to demonstrate the gonor-

rhœal nature of a purulent ophthalmia, although the presence of urethritis had been denied.

The well-known preventive qualities of vaccinia, although based purely on empirical knowledge, soon gave birth to the hope that prophylactic inoculations might be practiced also for other infectious diseases than variola. Pasteur has succeeded in producing an attenuated virus of anthrax and of chicken cholera. He heats the pathogenic bacteria to a temperature just below that which would kill them, and subsequent generations of such debilitated microbes inherit the diminished virulence and protective properties of their ancestors. The practical value of this discovery has, unfortunately, been very much diminished by Koch's observation that the preventive inoculations of anthrax did not render the vaccinated animals refractory to infection from the alimentary canal, which is the gate at which the disease enters in the great majority of cases. Similar inoculations have also been practiced to a considerable extent on man against cholera by Ferran, and against yellow fever by Domingo Freire, but these experiments, although now looked upon with more favor by eminent bacteriologists than they were in the beginning, are not yet numerous enough to warrant definite conclusions. Some recent experiments would seem to indicate that the ptomaines secreted by the bacteria, or even the salts contained in the urine of animals suffering from certain infectious diseases, can be used successfully for protective inoculations.

I have now attempted to briefly outline the great progress made by this new science within the last six years. Over 200 varieties of bacteria, I believe, are now known. But very much still remains to be done. It is easily understood that the differences between these minute beings, situated at the very boundary lines of the still visible, must be very slight. Although Koch has demonstrated so well the features distinguishing the comma bacillus of Asiatic cholera from that of cholera nostras, that even the novice can recognize them, still other bacteria remain so similar to each other that the keenest expert cannot predict their opposite effects upon the animal economy. To mention but one example: Löffler has described, under the name diphtheria bacillus, a micro-organism causing in animals the most rapidly fatal septicæmia; but, with an impartiality worthy of respect, he does not claim it to be the real cause of the disease, because he also found apparently the identical bacillus, with the same virulent properties, in one out of twenty normal fauces. Another observer cultivated from the pharynx of various healthy persons, and from those affected with true diphtheria, with scarlatina and rubeolar angina, a microbe resembling very closely in every respect, not only morphologically but also in its colonies in different cul-

ture media, the true diphtheria bacillus, which, however, is perfectly harmless when inoculated into animals. And more than this, between these two extremes all gradations of toxicity are found, some producing but a slight local infiltration, others large abscesses, others again severe necrotic changes, others still killing only young animals and sparing adults. On the other hand, the same micro-organism, under varying conditions, may so change in size and shape as to successfully hide its identity.

Let us, then, hope that this new science, so auspiciously cradled by the French school in the 50's, so grandly nursed into vigorous youth by the Germans within the last six years, may continue to develop as rapidly in the future as it has done in the past.

## LIGATION OF FEMORAL ARTERY AND VEIN FOR STAB WOUND.

BY HAL C. WYMAN, M.S., M.D.,

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AND SURGERY, DETROIT.

Miles D., æt. 19 years, a clerk, in good general health, was stabbed in the middle of the thigh with a pocket knife. The knife blade was about three inches long and three-fourths inch wide. It penetrated its length and divided the left femoral artery and vein beneath the sartorius muscle. The hæmorrhage was sudden and appalling. The boy who struck the blow was spattered with blood, notwithstanding the wounded thigh was enveloped in pants and drawers. The wounded boy had knowledge and presence of mind sufficient to thrust his finger into the wound, and so restrain, in a measure, the hæmorrhage until a physician could be summoned and arrive.

Dr. F. W. Owen, of this city, responded to the call, and reached the patient within five minutes after the wound was received. He at once corded the thigh, compressing the femoral artery in Scarpa's triangle, summoned the Emergency Hospital ambulance, and had the patient taken to that institution, where I saw him a few moments later.

He was then deathly pale, too exhausted to tell me how the wound occurred, and fainted when his head was raised from the level of his body. His pulse was too rapid and weak to count, and so compressible that the most delicate touch was necessary to detect it at the wrist. The corded thigh gave him great pain. He was ordered water and beef-tea freely for an hour. When his pulse and strength were better, chloroform was given. The wound was traversed by an incision about three inches in length along the internal border of the sartorius muscle. The sheath of the femoral vessels was revealed by turning aside the sartorius muscle. The stab-wound was shown to

have transfixed the sheath, and to have divided the femoral artery, and to have very nearly divided the femoral vein. The ends of the artery had retracted, so that the cut surfaces were about one inch and a quarter apart. The wound in the vein was open like a wide V, three-fourths inch wide at its widest part. Ligatures of carbolized silk were applied to both distal and proximal ends of artery and vein. Then the muscle was turned back, a drainage-tube inserted, and the wound closed with interrupted sutures.

The pressure had been in the meantime removed from the arteries by taking off the cord which Dr. Owen had tied tightly around the thigh to stop the hæmorrhage, and the impulse of the beating artery against the ligature on the proximal end of the artery was plainly felt by my finger. All the ligatures (four in number) were applied about one-half inch from the cut surface of the vessels. The wound was dressed with antiseptic gauze cotton and bandages sterilized by corrosive sublimate and heat. The leg and thigh were enveloped in cotton, and laid on a pillow surrounded by hot bottles. The leg was elevated to favor return circulation.

The next day, December 11, 1888, the toes were warm and movable. The leg and thigh below the wound were swollen moderately. The pulse was 120 and weak, the temperature  $102^{\circ}$  F.

December 12 there was oozing of bloody serum from between the sutures. The leg, thigh and foot were warm, but more swollen. The spaces between the sutures gaped and oozed. Pulse 120, temperature  $101^{\circ}$ . The patient's bowels moved. His tongue was furred, his mind clear, and his disposition hopeful and kind. He told how the wound was received, and how quickly after all looked dark to him; how his head whirled.

Dec. 13 some of the sutures gave way with the swelling of the thigh and leg. The calf of leg was very hard. The wound produces pus along its edges. Care is taken that dressings are not applied so tight as to interfere with venous circulation. No swelling or tension of thigh above the point of ligature of artery and vein. Pulse continued weak and rapid, appetite good, kidneys acting normally. Temperature  $101^{\circ}$ , once  $100^{\circ}$ . The great toe is cold and looks pinched and shrunken. A pin thrust into it is not felt. It is white, like if frozen.

Dec. 14. General condition good. Patient says he has no pain, and a good appetite. Slept well. The temperature and pulse are  $102^{\circ}$  and 120. His tongue trembles but his voice is strong and a trifle shrill. The wound is suppurating moderately. The great toe is black on its inner border and continues cold and without sensation; the other toes are paler and without sensation.

Dec. 15. Bowels moved naturally. Has eaten well, but with less relish. Has mild delirium after sleep. Pulse 120, temperature  $103^{\circ}$ . Is

restless. Great toe and two next toes quite black and cold. Instep and arch of foot warm and sensitive. Great toe has mortified look. No sign of demarkation. Swelling of leg and thigh less. Calf not so hard, tongue shaky, hands nervous.

Dec. 16. Temperature  $101^{\circ}$  in A.M.,  $105^{\circ}$  in evening. Pulse remains in the same weak and rapid condition. Gangrene has extended to base of first metacarpal bone, and slopes down across the foot to little toe. Patient does not take food well. Is taking freely of iron and quinine.

Dec. 17. Gangrene has extended about half inch further up the toes and foot. Temperature  $104^{\circ}$ , pulse 120. Wound is granulating. Swelling less in leg and thigh; all feel warm except toes. No defined line between cold and warm, dead and living tissue. More delirium; tongue furred, appetite gone. Takes milk and gruel. Urine muddy.

Dec. 18. General condition unchanged. More of the foot dead. Cotton and artificial warmth still applied to leg, etc.

Dec. 19. Temperature reached  $106^{\circ}$ , pulse more rapid and feeble. General condition worse; foot and leg unchanged.

Dec. 20. Temperature  $101^{\circ}$ , pulse 120. Patient has taken freely of whisky, iron and quinine. Bowels moved. No appetite, but takes food. Condition otherwise unchanged.

Dec. 20. Gangrene has run up over instep to ankle. Does not feel my finger on the bottom of his foot, but is sensitive about the malleoli. Temperature  $102^{\circ}$ , pulse 130. Same treatment.

Dec. 21. Temperature  $105^{\circ}$ , pulse 130. Respiration hurried and short. Delirium at times, but is easily roused out of it. Bowels and kidneys acting well.

Dec. 22. Temperature  $105^{\circ}$ , pulse 130. Other symptoms same as yesterday. Is much weaker. Leg and foot unchanged. Wound discharges thin pus.

Dec. 23 and 24 patient continued to grow weak, Began to raise the larynx with each inspiration; and died on the evening of the 24th, fifteen days after the wound was received.

The toes and adjacent part of foot had blackened and mummified. There was no line of demarkation. There was no softening of the parts adjacent to the wound. The gangrene was limited to the parts below the ankle, with some discoloration of the anterior aspect of the lower third of the leg.

Death in this case was due, I think, to the hæmorrhage, and not to the changes which resulted from the ligation of the artery and vein.

2. The fever was due to the hæmorrhage—exhaustion fever—and not to sepsis from the wound or the dead toes or foot. There was fever before the toes were cold, or discolored, or dead.

3. No blood worth speaking of was lost while applying the ligatures to the artery and vein. At

no time after the patient reached the hospital was he sufficiently recovered from the shock and hæmorrhage as to make amputation of the thigh a safe procedure.

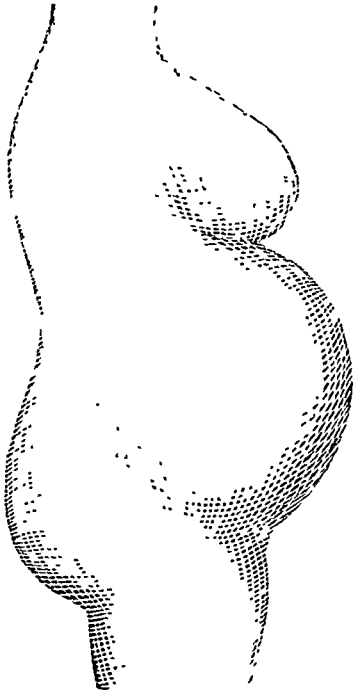
4. It would be interesting to know what peculiar ferment, bacterium, chemical, or fever factor is liberated or confined in the system after severe hæmorrhages. It certainly seems to be set in action by the hæmorrhage, and appears to be wholly independent of external influences.

### A CASE OF HERNIA OF PARTURIENT UTERUS THROUGH THE LINEA ALBA.

*Read before the Medical Society of the District of Columbia, October 31, 1888.*

BY CHARLES E. HAGNER, M.D.,  
OF WASHINGTON, D. C.

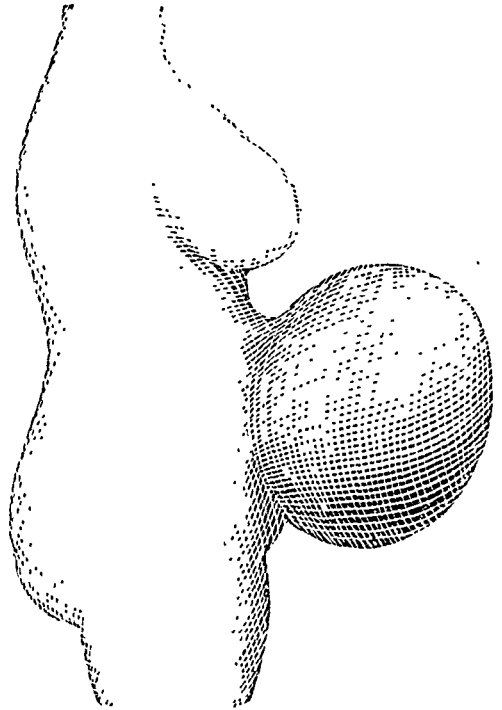
In July, 1884, I delivered a primipara, Mrs. Blank, (after a prolonged labor) of a full term female child. Forceps were used, with slight laceration of the perineum, which was immediately stitched up and healed perfectly. She made a good recovery, and showed no signs of ventral hernia.



In March, 1886, Mrs. B. was delivered of a second full-term female infant without forceps, the perineum remaining intact, the labor being a short one (six hours), and perfectly normal. Within three months patient called my attention to a "lump" about the umbilicus. Upon examination I found an umbilical intestinal hernia, about the size of an egg, which was readily reduced, the opening being large enough to permit

the introduction of the end of the finger. An abdominal truss was ordered which retained it perfectly. The patient wore this until she was taken in labor with her third child, in Feb., 1888.

On Feb. 8, 1888, at 10 A.M., I was called to see Mrs. B., and found her in the first stage of labor, os dilating and pains frequent. I remained an hour, when, everything progressing normally, I left her for an hour and a half. Upon my return found the bag of waters ruptured, patient in bed and in active labor; os fully dilated, head engaging L. O. A. The labor progressed normally and actively for about an hour and a half, examinations being made from time to time. Suddenly the patient after a very violent pain, called out and said: "Oh doctor, I am tired out, I can no longer bear down." It had been about ten minutes since my last examination. On approaching the bed, I observed that the abdominal tumor, heretofore perfectly normal, presented a peculiar appearance, being much more prominent, and seeming to project at right angles to the patient's body, she lying on her back. Upon lifting the sheet, I was startled to find that the uterus had left the abdominal cavity, and was covered only by the skin, which was very tightly stretched, and seemed as thin as tissue paper.



The uterine vessels were clearly seen, also the contractions, when a pain came on. The head at this time was in the vagina, and I immediately saw that the woman was correct in saying that she could make no expulsive effort. Notwithstanding the uterine contractions, which were regular, and strong and visible, the head making no advance, and the patient becoming exhausted, I immediately applied the forceps and delivered



the child. There was no difficulty in applying the forceps, as the head was well down, but the impossibility to restore the uterus to its normal position, and its tendency to fall to one side or the other, made it necessary to have the nurse support it in the median line until the child was extracted. It proved to be another fine healthy girl. The placenta was quickly extracted by the hand, as the patient seemed exhausted, and I was most anxious to terminate the labor.

As soon as the placenta was removed there was little trouble in replacing the uterus through the opening in the walls of the abdomen, it having thoroughly contracted and reached its proper size. A suitable bandage was applied, and the woman made a good recovery. It is surprising to find how small an opening there seems to be in the abdominal wall at present; the lady was in my office to-day; she is wearing the abdominal bandage she wore before her last pregnancy, and says she suffers no inconvenience. I had not seen her before for several months, and sent for her so that I could report her present condition.

1507 H. St., Washington, D. C.

## MEDICAL PROGRESS.

**EIGHTY CASES OF CHOREA.**—At the meeting of the Royal Medical and Chirurgical Society on January 8, Dr. W. P. HERRINGHAM read a paper on "Eighty Cases of Chorea: Antecedents, Family History, State of the Heart, and subsequent History," of which the following is a summary. Antecedents: Acute rheumatism preceded the attack in nineteen cases, immediately in four, at some interval in fifteen. It accompanied the chorea in two cases. Pains in the joints preceded the attack in fifteen cases, accompanied it in one case. The total number of cases in which rheumatism could be traced was thirty-seven. Injury, shock, or violent burst of emotion preceded the attack in six cases. The interval was never greater than two days. Hard mental work or worry was found in twenty cases. These influences were not mutually exclusive, since all those classed under injury, shock, or emotion could alone be considered as exciting, the others only predisposing causes. In twenty-five cases none of them could be traced, and of these fourteen were first attacks. Nearly all the patients were delicate; headaches and indigestion were the most common complaints. Family history (calculated from parents, brothers, and sisters only): Rheumatic fever had occurred in twenty-five out of seventy-five families, seventeen of which belonged to thirty-four patients of the rheumatic classes, and the remaining eight to forty-one in whom there was no history of rheumatism. Chorea had occurred in twelve families,

nine of which were also rheumatic. State of the heart (throughout): Natural in ten, uncertain (that is, doubtful) endocarditis in twenty-five, certainly diseased in twenty. Signs of disease developed during observation in eleven cases, and signs which were at first present vanished during observation in four. Thirty-seven cases were seen again, usually at an interval of two years or over. For the most part they presented the same state as before. Of the twenty-five doubtful cases two had become healthy, seven appeared certainly diseased. Of the eleven cases which developed signs during the attack of chorea, five were re-examined, and of these two were natural, while three gave good evidence of disease. This last was important, as tending to show direct influence of chorea upon the heart. The following conclusions were drawn: 1, that a large number of choreic patients were liable to rheumatism; 2, that choreic patients were nearly always of a delicate constitution; 3, that chorea was sometimes directly caused by emotion; 4, that chorea might cause permanent heart disease; 5, that it also gave rise to signs of heart disease which were not permanent.

DR. A. E. GARROD, at the same meeting read a paper "On the Relation of Chorea to Rheumatism, with Observations of Eighty Cases of Chorea," sixty-one of the patients being females, and only nineteen males. Forty-nine were suffering from first attacks. The average age of the female patients was considerably higher than that of the males. There was a history of rheumatic fever in the near relations of twenty-six patients, of rheumatism with swollen joints in those of three, and of rheumatism in three more, making a total of thirty-two, or 40 per cent., with rheumatic family histories. It was pointed out that the tendency to chorea was far more marked in some rheumatic families than in others, and examples were quoted illustrating this point. The total number of cases in which there was a personal history of rheumatic manifestations other than endocarditis was thirty-six or 45 per cent. In fifteen of these there was a definite personal history of rheumatic fever, in nine of rheumatism with swollen joints, in one of joint pains, confining the patient to bed, and in nine of joint pains only. One patient had nodules but no arthritis, and one had acute pericarditis. It was shown that the same patient sometimes had an attack of chorea with joint pains only, and a later attack with well-marked rheumatic fever. Evidence was brought forward to show that some cases in which there was no family history of rheumatism, and no personal history of joint pains were nevertheless of rheumatic origin, cases being quoted of rheumatic patients who had previously suffered from chorea, of the development of erythema nodosum and arthritis in the course of apparently non-rheumatic chorea, of

chorea with endocarditis and nodules without joint pains, and of the association of acute pericarditis with chorea. In fifteen cases the onset was ascribed to fright, but in some instances inquiry showed that the fright followed the onset of the chorea. A definite murmur was heard in forty-five cases, or 56.25 per cent., and in six others the first sound was murmurish. The percentage of murmurs was naturally highest amongst those with personal histories of rheumatism, but was lowest amongst those with family history only. In some instances the murmurs developed under observation. The opinion was expressed that the endocarditis of chorea was probably always of rheumatic origin, but that we had no evidence to show that all chorea was of rheumatic origin, a considerable number of cases being probably due to emotional and other causes.

DR. CHEADLE said that there was no need for any apology for bringing up the subject again, as it was one which had not as yet been at all settled. It was leading to the conclusion that rheumatism was something much larger than arthritis. He thought Dr. Herringham had in some points based his inquiries on too narrow a definition of rheumatism, and also he was obliged to neglect those cases in which rheumatic arthritis followed chorea. Truly rheumatic symptoms in children were often very slight and transitory. He had a child admitted with chorea under his own care in St. Mary's Hospital, in whose history and symptoms careful examination had failed to detect any sign of rheumatism on admission, and yet in whom, after four or five days, slight rheumatic arthritis came on, and lasted only forty-eight hours, but yet was quite distinct under the circumstances it was then in, but it would have never been noticed in the homes of the poor. He was surprised that Dr. Herringham had found fright or emotion a cause in only six cases. He had himself noticed the case of a rheumatic child who had had chorea, and had recovered completely; it was taken to the pantomime, and next day it was in violent chorea again. A rheumatic boy at Charterhouse, after recovering from a first attack, got it back again from the violent emotions of a schoolboy's quarrel. Chorea went along with an unstable nervous system, and in a family it was very often noticed that the unstable one was the rheumatic. He should have expected to find some reference to the minor rheumatic symptoms in Dr. Herringham's paper—such as erythema and rheumatic nodules; both were common in rheumatic chorea. In placing headaches among the commonest of minor affections in chorea, he was glad to see Dr. Herringham agreed with the Collective Investigation Reports. As to the larger generalizations about the connections of chorea, he was himself inclined to think that much more chorea was rheumatic

than was generally allowed; in a choreic case the absence of previous arthritis was not a proof against rheumatism, for it might have been overlooked, or it might come after the chorea.

DR. SANSOM wished to confine himself to one question: Was fright-chorea always rheumatic chorea? From his own experience he should certainly answer, No. Dr. Herringham seemed to him to favor the theory of the pan-rheumatic origin of chorea. He admitted, of course, that rheumatism was a cause in many cases, but he thought there was definite proof that there were also cases arising in non-rheumatic patients from fright only. He believed that in some figures brought forward by Dr. Stephen Mackenzie these amounted to as much as 15 per cent. As an example he cited the case of a child under his care in the London Hospital, who, up to the time of the onset of the chorea had had no disease at all. It had been in a burning house, and had suffered intense fright. The heart was put into a state of palpitation, after which chorea was developed. There was no connection with rheumatism. If an origin of chorea was sought for which was *a priori* probable, it was easy to see that fright would supply such a cause for the phenomena noticed in the heart. The first thing that followed on fright was pallor—an inhibition of the heart, with local contraction of the arterioles. After that there was a violent reaction and overaction of the heart, such as might be quite enough to cause injury to the valves. He wished to emphasize two different classes of change found in the choreic heart: first, those due to rheumatism; and, secondly, a smaller group, producing a quite different murmur, sometimes even an aortic diastolic murmur, which was transitory. As for any choreic action of the muscoli papillares, he thought there was no need to dwell on its impossibilities, for it had been abandoned long ago. On the whole, however, he thought there was a very strong case for an endocarditis which was not rheumatic.

DR. STURGES was very sorry to see the pan-rheumatic theory of chorea gaining ground. It was unfortunately a point upon which physicians were apt to form themselves into parties as if they were parliamentary politicians. Dr. Cheadle had stated the view of the rheumatic party strongly, and he hoped he might be allowed to put forward some other considerations. Dr. Herringham, in his eighty cases, had only found the immediate connection of acute rheumatism in four cases; less even than in the cases attributed to shock or fright. Rheumatism as a cause was often too far to seek. Dr. Cheadle had mentioned cases in which rheumatism had followed chorea, but he had not himself found anybody attributing the causation of rheumatism to chorea. In the case of children, it was often very difficult to find out when they had had rheumatism, and

yet very easy to hear of their chorea, for many of the parents dreaded the disease unduly, and asked constantly if it was "going to the brain." The relationships of rheumatism and chorea were differently estimated in different countries. In Germany rheumatism was looked on as a trivial cause of chorea. In France chorea was one of the manifestations of rheumatism. In the United States, Dr. Osler in some very careful statistics had come to the conclusion that in only 15 per cent. of the cases of chorea was there any relation to rheumatism. It was a large and at present obscure question whether there was some deep connection between joint pains and nervous disease. Certainly in some cases of rheumatic arthritis the exciting cause was not external cold; and again there were a few other cases where nerve strokes produced joint pains first and chorea afterwards. In the case of a little child just under 3 years old under his care, the primary cause of disease had been the quarrelling and fighting of its father and mother, and this had produced first chorea and then rheumatism. In the first stage of this nervous chorea they had emotion, then motion followed. The important point was to stop it before it came to motion. It was often noticed by parents and schoolmasters how often a child was stupid or generally out of temper when it was going to have chorea; that was the important time to recognize, for then it might be arrested; after that they had failed to gain much control over it.

DR. BARNES thought that in any general discussion on chorea its relations with pregnancy ought not to be neglected. When chorea had occurred in a girl it sometimes comes out again in pregnancy with great violence, and occasionally turned into insanity, or ended fatally. To grasp its nature completely, he thought that even a larger view of its pathology was wanted than what had been taken that evening. Fright, he admitted, was a serious condition and an absolute cause. Whether pregnancy was a cause of valvular disease he admitted that he was not pathologist sufficient to affirm or deny absolutely.

DR. STEPHEN MACKENZIE agreed with much that Dr. Cheadle had said, but thought that to convince other people than oneself that rheumatism was the cause of chorea in all cases needed more precise evidence than it was possible to obtain. From the survey of the facts in Germany, France and the United States, it was clear that rheumatism was only one factor in the causation of chorea. Chorea, however, was far more nearly connected with rheumatism than any other nervous disease. He must remind Dr. Sansom that it required a very special nervous disturbance to bring on chorea. Epilepsy did not bring it on, nor tetany. He was glad Dr. Barnes had brought to the front his point that chorea in a pregnant woman was a very serious malady. But

many pregnancies in women who had had chorea in childhood might be passed through without recurrence of chorea; some special cause was needed to revive it.

DR. ROBERT LEE had come to the conclusion that not much could be gained from the study of clinical tables. What was this chorea they were discussing? It was nothing more than a group of symptoms, not a disease. No group of symptoms could cause heart disease. We could find out very little about the origin of chorea until we could tell whether all choreas were the same. Emotional cause in the younger children could not be neglected; that was just the attraction in the study of the disease.

DR. HERRINGHAM said he had been taken to task for using rheumatism in too narrow a sense as merely an arthritis, and neglecting such points as erythema, rheumatic nodules, and others; but he had deliberately abandoned any attempt to learn accurately of such things from the out-patient class from which he had drawn his statistics. Dr. Sansom had spoken of an effect on the heart as the first result of fright, but would he not on reconsideration have to go back to an effect on the nervous system influencing the heart as even prior to that? To Dr. Barnes he was much indebted, and wished there were many more of his colleagues in his branch of practice who took an equally broad view of pathology. It seemed almost necessary to remind Dr. Lee that all diseases were collections of symptoms. Chorea, he quite admitted was no exception to that rule; nor was rheumatism, and yet Dr. Lee spoke of rheumatism as a thing well known enough.

DR. A. E. GARROD thought he should just guard himself by reminding one or two speakers that he had never said that all chorea was rheumatic. Dr. Sansom had spoken of fright as a direct cause of valvular disease of the heart. He should ask Dr. Sansom if that were so, where he would find a case of heart disease due to fright which was entirely separate from chorea. Such questions had been often asked, and were very seldom answered. He was himself quite inclined to take the view of rheumatism as a very general disease, of which arthritis was only one symptom.—*Brit. Med. Jour.*, Jan. 12, 1889.

THE DIET IN CONVALESCENCE FROM TYPHOID FEVER.—In the course of an instructive paper on the management of this stage of convalescence in typhoid fever, Dr. J. H. HUTCHINSON says (*The University Medical Magazine*) that his own experience has been in accord decidedly with those who have found a too early return to solid food prejudicial to the speedy recovery of the patient. He has long since come to agree with Sir Thomas Watson that the management of the convalescence of typhoid fever is scarcely of less importance than that of the fever itself. It is certainly

not less difficult. A part of this difficulty arises from the impossibility of convincing the patient's friends that his voracious appetite cannot be fully indulged without danger. Dr. Hutchinson's own custom has been to continue the administration of milk, which forms the almost exclusive diet of his patients in the febrile stage, in cases in which it is well borne—and there are few in which it is not—for three or four days after the occurrence of normal evening temperatures, with the addition of animal broths. At the end of this time he gives eggs (soft boiled), the juice of rare meat, milk toast and other farinaceous articles of food. At the end of a week the soft part of oysters and fish are added to this dietary, and at the end of ten days the light meat of broiled chicken, and at the end of two weeks, butchers' meat. All these articles of food are given in small quantities at a time, but may be repeated at first once or twice, the latter oftener during the day. If milk be given in sufficient quantity—say 6 ozs. every two hours—it will fully meet the wants of the system. The only objections that can be possibly urged against this plan of treatment are that the continued use of milk is tiresome to the patient, and that it produces constipation. The first objection is of little moment, if there are dangers attending the administration of other kinds of food; it may be obviated by giving, after the first few days, at the same time with the milk, some of the farinaceous articles of food which will make it more acceptable to the patient, and will at the same time prevent, to a certain extent, its tendency to produce constipation.—*The Dietetic Gazette*, January, 1889.

**TREATMENT OF INTERNAL HÆMORRHOIDS BY INJECTION.**—In the *Illustrated Med. News*, October, 1888, a leading article recommends the further trial of treating internal hæmorrhoids by injection. The best plan is to use strong carbolic acid, which is applied with an ordinary hypodermic syringe in the following manner: The bowels having been thoroughly cleared out by an enema, and the hæmorrhoids well protruded, the patient is placed on his hands and knees, or directed to bend over a chair. From two to five minims of the carbolic acid are then injected slowly into the centre of each pile. After the injection has been made the hæmorrhoids swell rapidly, and it is desirable to return them within the sphincter as soon as possible, and the patient should be told to push up any portion which may subsequently protrude. The bowels should be kept quiet for twenty-four hours, and for the next few days gentle aperients should be used. If the rectum be examined with the finger a week or so afterwards, it will be found that there are indurated swellings corresponding to the points of injection; these shortly subside. Some observers direct that only one hæmorrhoid be treated at

each sitting, but others prefer to inject all at one sitting. Sometimes a second injection is necessary after a fortnight; but it is seldom necessary to make more than two injections to cure a pile for many years. It is also useful to give an astringent ointment to be applied before and after the daily motion, for a few days. This treatment requires no anæsthetic, and enables the patient to go about his usual work at once, and is rarely followed by any complications.

**THE RAPID CURE OF ANAL FISTULA.**—DR. LONGO concludes his thesis with the following statements (*Bull. Gén. de Thérap.*, November 15, 1888):

1. The method ordinarily employed in the cure of anal fistula, while not entirely exempt from risk, necessitates constant attention for at least thirty days, and predisposes to relapse.
2. From the employment of the antiseptic method, a method of cure is possible in which the result may be attained in a much shorter time.
3. These processes, already employed with considerable success, consists essentially in the entire excision of the fistulous structure and the reunion by the first intention of the outer surfaces.
4. Cure is ordinarily obtained within ten days.
5. The majority of fistulas are amenable to this treatment, which is exempt from danger, which is usually not followed by relapse, and whose employment is not accompanied by any insurmountable difficulties, with the single exception of the rigorous application of the antiseptic method.
6. When the fistulas are united, accompanied by extensive development of pathological tissue, or when their rectal orifice is situated very high up, or when the fistulas are accompanied by hæmorrhoids,—then only is this method not applicable.—*Therapeutic Gazette*, January 15, 1889.

**TUBERCULOSIS FROM CONTAGION.**—At the meeting of the Finnish Medical Society, at Helsingfors, Sept. 22, MR. RUNEBERG reported a case of tuberculosis undoubtedly caused by contagion. The patient was a peasant, 39 years of age, who had an untainted family history, and showed in his own constitution no tendency to phthisis. Two years ago he was in perfect health; but the symptoms appeared a little after the death of his wife from consumption. He had occupied the same bed and nursed her during an illness of several years.—*London Medical Recorder*, Jan. 21, 1889.

**LACTIC ACID IN TUBERCULOUS DIARRHŒA.**—SÉGARY and AUNE recommend lactic acid, 2, 6, or 8 grams in twenty-four hours, in the treatment of diarrhœa of phthisis. They report 9 successful cases.

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SATURDAY, MARCH 2, 1889.

MORBID ANATOMY AND PATHOLOGY OF  
CHRONIC ALCOHOLISM.

The discussions relating to these important topics by the members of the Pathological Society of London, commenced on December 4, 1888, have brought prominently before the profession many facts of very great importance. Dr. Joseph Frank Payne, Vice-President of the Society and Physician to St. Thomas' Hospital, opened the discussion, with Sir James Paget in the chair.<sup>1</sup> After a brief historical introduction he asks "in what sense is alcohol a poison?" Defining a poison to be "a substance capable of injuring the body, either by causing damage to the tissues or by causing functional disturbance," he arranges all poisons into two classes, namely: "tissue poisons and functional poisons." He shows that alcohol, taken internally, is carried by the blood to all parts of the body, and not only speedily produces derangement of nervous functions, but also acts directly on the tissue elements, "producing degeneration, or ultimately necrosis, of the mucous membrane of the stomach, liver-cells, nerve fibres, nerve cells and muscular fibres;" and when the action is persistent or chronic it results in hyperplasia of connective tissue, fibroid changes, fatty degeneration and fatty infiltration. He concludes by stating that "the action of alcohol on tissue or tissue elements is threefold: 1, as a functional poison; 2, as a tissue poison or destructive; 3, as a checker of oxidation."

Both Dr. Payne and Dr. Lionel Beale claimed

that the structural changes found in the liver from chronic alcoholism involved not only hyperplasia of the connective tissue, but also essential atrophy of the liver cells, and presented microscopical sections apparently sustaining their view.

Dr. George Harley, who followed Dr. Payne in the discussion, said: "The visible lesions produced in the digestive, circulatory and urinary organs by an excessive use of alcohol had been long recognized and carefully studied. The thickening of the mucous coats of the stomach, the hypertrophies, the indurations, the fatty amyloid and cirrhotic degenerations of the hepatic tissues; the atheromatous changes in the blood-vessels, and consequent hæmorrhages and apoplexies; the hypertrophy of the heart's tissues, and the dilations of the cavities: as well as the fatty and granular degenerations of the cortical substance of the kidneys, had long been recognized. These tissue-changes, however, formed but a small proportion of the morbid effects met with in practice, from the fact that for every drunkard there were fifty others who suffered from the effects of alcohol, in one form or other. Amongst them were persons who had never been intoxicated in their lives. Of this so-called class of moderate drinkers, neither our hospital statistics nor our national mortality tables took any account, and yet it was those very moderate drinkers who were in reality the most numerous class of alcoholic victims." He corroborated this statement by reference to the Registrar-General's tables of comparative mortality of those engaged in different industries, in which it was shown that the death-rate of men between the ages of 25 and 65, engaged as brewers, commercial travelers, innkeepers, publicans, wine, spirit and beer dealers, was six times greater from diseases of the liver, and nearly two times greater from diseases of the urinary organs and the circulatory system, than in farmers and graziers, drapers and warehousemen, gardeners and nurserymen. Another important item presented by Dr. Harley related to the effects of alcohol on the constituents of the blood. His experiments had shown that the addition of 10 per cent. of alcohol to fresh arterial blood changed its color, prevented its re-oxygenation and destroyed its power of producing hæmin crystals. The addition of only 5 per cent of alcohol, while making no visible change in the color, yet entirely destroyed the capacity of the corpuscles for further oxydization

<sup>1</sup> See British Medical Journal, December 8, 1888

or purposes of nutrition; thus showing that alcohol in small quantities produces an asphyxiating effect on the blood itself. In other words, it lessens the processes of oxygenation and decarbonization of the blood that take place chiefly in the lungs.

The *Lancet*, January 26, 1889, in its leading editorial on the discussion in the Pathological Society, has the following significant statement: "What is eminently worthy of the attention of practitioners in this connection is the frequency of *tubercular* disease in cases of alcoholic paralysis. In fact, the association of chronic alcoholism in all forms and tuberculosis was brought out by almost every speaker, including Dr. Payne, who said truly that the *inaccurate* impression that habits of alcoholic excess were in any way antagonistic to tubercular disease must be regarded as swept away." In another paragraph it says, emphatically: "We have seen the demolition of the belief that alcohol is a preventive of tubercle." When, in 1860, we presented to the Medical Section of the American Medical Association, in session at New Haven, the results of six years' clinical study of all cases of tuberculosis coming under our observation in their relation to the use of alcoholic drinks, by which it was clearly proved that the use of such drinks not only exerted no prophylactic influence, but the reverse (see *Transactions of the Amer. Med. Association*, Vol xiii, p. 565, 1860), not a few of our contemporaries thought it sufficient to attribute our conclusions to "temperance fanaticism." Will they apply the same logic to the work of the London Pathological Society at the present time?

#### THE ILLINOIS REPORT ON MEDICAL EDUCATION.

The Secretary of the Illinois State Board of Health has just issued the "Report on Medical Education, Medical Colleges, and the Regulation of the Practice of Medicine in the United States and Canada: 1765-1889." It may be said that this is the most complete and the most encouraging report on medical education that has been issued in this country, and shows a marked and gratifying progress in the direction of a higher standard of instruction and of educational qualifications for the practice of medicine. There have been, and still are bars to the attainment of the desired

end; some of the obstructions have been removed, and others show signs of yielding; so that the prospects for the future are encouraging.

This Report embraces 267 medical institutions of all kinds in the United States and Canada—as against 252 in the Report for 1886—251 being in the United States. The total number of medical colleges now in existence, in North America (exclusive of Mexico) is 131, 118 being in the United States. In 1886 the number was 129, 117 being in the United States at that time. The number of extinct medical institutions is now 130—showing that a medical college may be founded but not established.

There has been an increase in the number of colleges exacting educational requirements for matriculation. In 1880 the number was 45, 44, in 1886, and is now 117. In 1880 but 22 colleges required attendance on three or more courses of lectures; in 1886 the number was 41, and 47 at present. There has been an increase in the number of colleges that recommend and provide for, but do not exact attendance on three or more courses.—53 in 1880, 48 in 1886, and 60 at present. Hygiene and medical jurisprudence claim a larger place in the medical college curricula than ever before. In 1880, 42 colleges had chairs of hygiene, and 61 had chairs of medical jurisprudence; in 1886, there were 110 chairs of each; while at present hygiene is taught in 117 colleges, and forensic medicine in 112.

Since the Report of 1886 the average duration of lecture terms has been increased. The average for all the regular schools is now 25.3 weeks. This average, it may be said, is cut down by the 17 weeks' term of the Medical College of Georgia, and the 19 weeks' term of the Woman's Medical College of Cincinnati. One hundred and fifteen schools now have terms of five months and more, against 110 in 1886-87; 66 have terms of six months and more, against 63 in 1887-88, and 55 in 1886-87. A number of colleges have signified their intention of requiring four years' study and three years' lecture course in the near future, in accordance with the resolution adopted in July, 1887, by the Illinois State Board of Health, "that the phrase 'medical colleges in good standing' . . . is hereby defined to include only those colleges which shall, after the sessions of 1890-91, require four years of professional study,



including any time spent with a preceptor, and three regular courses of lectures, as conditions of graduation," etc.

The Report shows that there has been a gradual increase in the number of matriculates since 1884-85, both in the United States and in Canada, while in the United States the number of graduates has been about the same. The percentage of graduates to matriculates has therefore steadily diminished in the United States, from an aggregate average of 36.3 in 1881-82 to 30.3 per cent. in 1887-88 for all schools of medicine. The percentage of graduates to matriculates in the regular schools has decreased from 37.1 in 1881-82 to 29.6 in 1887-88. For the last calendar year this percentage varied in the individual colleges in the United States from 6.6 to 52.1. The Report says: "The percentage of matriculates to graduates is kept at a high point largely by the colleges in Atlanta, Baltimore, Louisville, Nashville and St. Louis, and those in Indiana."

We may appropriately close this notice of the Report by quoting the following from the introduction. "The effects of some of the State laws regulating the practice of medicine, have now shown two things: 1. That there was and still is a necessity for such legislation. 2. That under this legislation the colleges that have failed to comply with the demand for better work, must improve their methods or shortly close their doors. A study of this report will show that while there is an increased number of medical institutions that have recognized their duties in this regard, there are still some which seem wedded to as low a standard as is at all compatible with even scant recognition by the medical profession. On the other hand, the improvements in the methods of instruction and in the practical facilities for study, not less than in the exaction of a preliminary test of fitness for the study of medicine—have been more marked during the period which has elapsed since the publication of the last report of the Board on this subject than during any similar period in the history of the country."

*El Escolar Medico*, the first number of which has been received, is a small monthly medical journal edited by a committee of the students in the school of medicine at Monterey.

## CARBONIC ACID EXHALATION IN DIABETICS.

The quantitative modifications of the carbonic acid exhaled by diabetics under the influence of diet and medicines has been investigated by LIVIERATO, of Genoa, his results being published in *Archiv für experimentelle Pathologie*, Bd. xxv, S. 161. The experiments were made on three diabetic persons, one man and two women, one of whom was obese. All the patients had had diabetes for several years, and each excreted about 500 grams of sugar a day (twenty-four hours). The carbonic acid exhaled was measured by Pettenkofer's method; the patient respired in a cabinet. The amount of sugar was determined by Wild's polarimetre. Livierato's results may be summarized as follows:

In diabetics on ordinary diet the excretion of carbonic acid is diminished by more than one-half. On a mixed diet, but with starch excluded, consisting of meat, milk, cheese and vegetables, the weight of the two thin diabetics diminished, while that of the fat patient increased a little. In all three the excretion of sugar was markedly diminished, while the excretion of carbonic acid increased a little, though not to the normal amount. On an exclusive meat diet the obese diabetic gained weight, as did the less thin of the other two. In the two that weighed most the excretion of sugar was markedly decreased, and there was increased excretion of carbonic acid. In the thinner patient there was increased emaciation, diminution of sugar, and stationary excretion of carbonic acid. Under the same diet, and with the use of bicarbonate of soda there was increase of weight in all the patients, diminished excretion of sugar, and considerable increase of carbonic acid, which was above normal in one patient. The addition of milk to the preceding diet always increased the amount of sugar and diminished the amount of carbonic acid excreted.

Under mixed diet, with the addition of lactic acid, the weight decreased or remained stationary. In the two other patients the sugar and carbonic acid remained stationary or increased slightly. Under ordinary diet (meat, bread, wine, soup, etc.) and lactic acid, the obese patient lost weight, as did the thinner of the other patients. The third patient increased in weight. The amount of sugar remained stationary, or was increased, and the carbonic acid increased in one case and decreased in the others. Under ordinary diet,

with the addition of bicarbonate of soda, all the patients gained in weight. The amount of sugar excreted by the obese patient remained stationary, but was markedly increased in the other patients. The carbonic acid exhaled was decreased in the case of the thin patients, and increased to normal in the fat patient. Generally speaking, then, the excretion of carbonic acid is in inverse ratio to the amount of sugar excreted.

It appears, then, that while the exclusion of starchy food is useful (and in fact almost imperative) an exclusive meat diet causes loss of weight, at least in thin patients. In these, says Livierato, a mixed diet, with the addition of bicarbonate of soda, which favors the combustion of the sugar, is most suitable. Lactic acid causes increased exhalation of carbonic acid, but does not correspondingly diminish the excretion of sugar.

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#### EDITORIAL NOTES.

A CYCLOPÆDIA OF THE DISEASES OF CHILDREN, by American, British, and Canadian authors, edited by Dr. John M. Keating, is to be issued in four volumes by the J. B. Lippincott Company, of Philadelphia.

THE *Westnik ssudebnoi mediciny i obschtschestvennoi gigieny*, hitherto published as a journal of forensic medicine and public hygiene, announces that it will hereafter be a journal of general medicine, and its title will be changed to *Westnik obschtschestvennoi gigieny, ssudebnoi i prakticheskoi mediciny*.

THE FOURTH CONGRESS OF RUSSIAN PHYSICIANS will be held in Moscow in 1891. The number in attendance upon the last (third) Congress was 1,648, 120 of whom were women physicians.

DEATH FROM CHLOROFORM IN A DENTIST'S CHAIR.—According to press dispatches a young lady died in a dentist's chair in Norwalk, Ohio, on February 21, after having had chloroform administered for the extraction of a tooth. It is stated that she "partly recovered from the drug," when "she started to rise from the chair, but suddenly sank back and died." From the meagre information conveyed in the press dispatches one cannot know whether the chloroform was administered by the dentist himself, or whether the

administrator was a physician, or a person sufficiently skilled to administer chloroform; but one can scarcely conceive of a skilful anæsthetizer giving chloroform to any one in a dentist's chair under any circumstances. A person that would give chloroform to a patient in a chair, would probably not take the other necessary precautions when about to give chloroform, such as removing all sources of constriction of the body.

Is it not time that dentists, and physicians also, learn that chloroform is a very dangerous drug when given improperly? With the other means of anæsthesia that we have, is the use of chloroform for tooth-extraction justifiable? The fact that teeth have been extracted under chloroform, and without injury to the patient, does not justify its use for this purpose. The surgeon that would seat a patient fully clothed in a chair, and give chloroform to amputate a finger, or open an abscess, would be guilty of negligence little, if any, short of criminality. We are too much inclined to excuse such blunders, hoping that the blunders have been taught a salutary lesson, which, however, is of no benefit to the person that has come to an untimely death. There should be more care, in dealing with the ills to which the flesh is heir, that the patient survive the treatment.

THIOL is the name given by Dr. Emil Jacobsen to a synthetic product having the exact formula of ichthyol, and being otherwise identical with it. It is intended as a succedaneum for ichthyol, being less disagreeable than it. It has been given internally in doses of forty grains, without apparent effects on the organism.

THE INFECTIOUS NATURE OF FIBRINOUS PNEUMONIA has been investigated by J. LIPARI, his results being published in *Il Morgagni*, August, September, and October, 1888. He reproduced pneumonia in animals by intratracheal inoculation of pneumonic sputa or of cultures of a microbe having all the characteristics of Fränkel's pneumococcus. In all cases he found the same microbe in great abundance, in the hæmorrhagic and sero-fibrinous pleural exudations, and in the hepatized pulmonary parenchyma, less abundant in the blood and spleen, inconstant in the liver, kidneys, and pericardial and peritoneal fluids. In some cases of pericarditis, peritonitis, and abscess of the liver the pneumococci were very

abundant. Inoculations of sputa or of pure cultures in the veins, in the peritoneum, or under the skin, never caused pneumonia; pneumonia occurred only when the inoculations were made through the lungs. The disease was first local, and then became general.

*The British Journal of Dermatology*, the first three numbers of which have appeared, is edited by Mr. Malcolm Morris and Mr. H. G. Brooke. By an arrangement with Professor P. G. Unna, articles sent to his *Monatshfte für praktische Dermatologie* and to the *British Journal of Dermatology* may be translated and published in both journals.

**MEDICAL STUDENTS IN GERMAN UNIVERSITIES.**—Official data give the total number of students of medicine in the twenty German Universities, for the winter semester of 1888-89, as 4,976 native-born, and 3,659 foreign, making a total of 8,635. Berlin has 1,456, and Munich 1,188, 670 of the latter being foreigners, while Berlin has but 385 foreigners. Erlangen has 181 foreigners to 116 natives; Freiburg 222 to 87; Jena 148 to 65; Leipsig 424 to 416; Strassburg 205 to 101; and Würzburg 798 foreigners to 186 natives. The other universities have more native than foreign students.

**A POLYCLINIC FOR NERVOUS DISEASES** will be instituted at Breslau in the near future under the direction of Professor Wernicke.

**MEDICAL PARIS OF TO-DAY** is the subject of a series of very interesting letters, which MR. ERNEST HART has been writing to the *British Medical Journal* for several weeks past. Among the subjects written of are the Pasteur Institute, its structure and arrangement, facilities for study, and plans of the Institute; the growth of places of higher instruction in Paris; the laboratories of bacteriology; the facilities for study by foreign practitioners and students, and the liberality to foreign students and practitioners; the cost of education; the official organization of teaching, and the training of teachers; hospital teaching; education and examination. Almost all of two long letters are devoted to M. Charcot, and La Salpêtrière and its 5,000 inmates. The first letter was devoted to a comparison of medical Paris of twenty-five years ago with that of to-day. It is to be hoped that Mr. Hart will publish the

really valuable series in pamphlet or book form, since they are of great interest to medical men generally, and medical teachers, particularly, can learn from them much that will be of value to them in their college duties.

## SOCIETY PROCEEDINGS.

Medical Society of the District of Columbia.

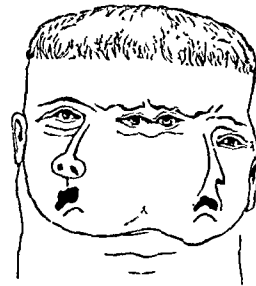
*Stated Meeting, October 31, 1888.*

SWAN M. BURNETT, M.D., IN THE CHAIR.

DR. A. F. A. KING presented:

1. DIPROSOPUS TRIOPHTHALMUS. 2. ANENCEPHALUS.

Dr. King stated that he was not prepared to give the history of either of the specimens. He thought, however, the specimen presented as *Diprosopus Triophthalmus* is *Diprosopus Tetraophthalmus* inasmuch, as there appear to be four eyes instead of three. In the drawing there are four eyes although the author gives it the name of "*Diprosopus Triophthalmus*."



DIPROSOPUS TRIOPHTHALMUS. (?)

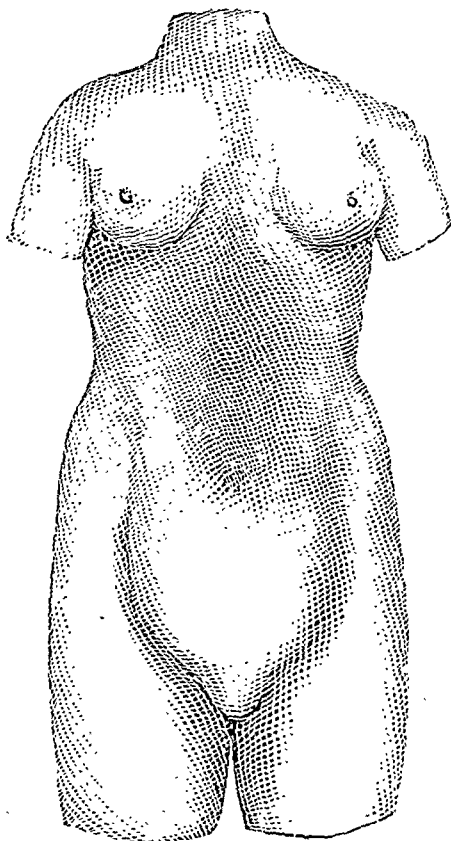
DR. LAMB: The four eyes in the specimen presented are due to anterior duplicity. There was not cleavage of the head. There was fusion of the head only, which takes place later than complete cleavage. The acephalous specimen is of great interest. The head is between the shoulders. There is absence of the brain and cord with fissure of the skull and cervical vertebræ. By some such interruptions to development are considered to be the result of hydrocephalus. Another theory is that the head fold of the amnion and the head of the embryo have grown together and prevented development. Neither of the specimens would have had viability lasting more a few hours.

DR. CHARLES E. HAGNER reported a case of HERNIA OF THE PARTURIENT UTERUS THROUGH THE LINEA ALBA.

(See page 302.)

DR. C. E. HAGNER: There are several points of interest in the case reported. Could he have prevented the rupture? As he had delivered two other women with umbilical herniæ and as this one had been delivered twice before without any trouble from the hernia he did not anticipate such a severe complication. When he discovered the uterus extra-abdominally he was afraid to attempt replacement as it was apparently just beneath the surface of the integument. Should such herniæ be operated on in child-bearing women? Or should such operations be postponed until after menstrual life? He remembered having read that some surgeon had operated on just such cases but he could not recall the facts.

DR. FRY: The experience of Dr. Hagner was both interesting and rare. Herniæ of the pregnant uterus are serious complications, and may call for the Cæsarean operation. In this case the umbilical hernia started the rent. We should expect to find relaxed abdominal walls in multiparæ; but in this case it was only the third pregnancy. It was formally very rare, but it may become more frequent as laparotomy becomes more common as we have seen that it has a tendency to weaken the abdominal walls.



He had been called to see a multipara, in the sixth month of her fifth or sixth pregnancy, for a tumor in the abdominal wall. The tumor had existed in previous labors but she experienced no difficulty from it. Examining it, he found that

the pregnant uterus protruded through an apparent separation of the linea alba. The diagnosis was not difficult. The tumor was pear-shaped, with its apex pointing downward. There was an oedematous swelling of the abdominal wall so that it hung down over the vulva like a bag. The drawing illustrates the appearance of the tumor. He did not think an operation would be justifiable unless there was suffering demanding it.

DR. KING: If a woman with an umbilical hernia should become pregnant he thought adhesive plaster would act better than a bandage, because it would slip as the abdomen enlarged. Hernia of the unimpregnated uterus was unusual, and of the impregnated is very rare. There are different varieties. Sometimes the uterus is outside of the abdomen before the impregnation and then it would remain outside. Two cases have gone to full term, the Cæsarean section has been performed and both women died.

DR. S. S. ADAMS had been able to find only one case reported similar to that of Dr. Hagner; but he had found a number of cases of hernia of the pregnant uterus a subject to which he had lately given considerable attention. He had found seven cases of inguinal, one of crural, five of umbilical and six of ventral hernia of the pregnant uterus. Cæsarean section was performed five times, Porro's operation induced labor once and natural labor once in inguinal hernia of the pregnant uterus. Four mothers were saved and four died and six children were saved and two were still-born. In the umbilical and ventral variety support was the principal treatment. Of the eleven cases the result in two is not stated. Nine mothers were saved and nine children; craniotomy was performed in one case, but this was offset by one twin pregnancy in which both children were saved.

*Stated Meeting, November 21, 1888.*

THE PRESIDENT, THOMAS C. SMITH, M.D., IN THE CHAIR.

DR. ERNEST F. KING presented a specimen and read the history of a case of

#### ULCER OF THE STOMACH.

J. L. M., white, native of Virginia. Visited in Virginia during past summer. Friends whom she visited report that she had good appetite and gained in weight, but complained of distress and at some times was in pain.

On Thursday, November 1, she went to spend the day and night with a friend. In the evening she walked one square to a church service, and during the service was seized with a deathly faintness and was with difficulty taken to the home of her friend and put to bed. On Friday she vomited blood, and again on Saturday. Her friends estimated the quantity as half a gallon. At mid-

night Saturday she vomited again profusely. I saw her first at 4 A.M. Sunday morning; blanched; suffering from nausea; pulse barely perceptible. Soon after my arrival she vomited some 4 ozs. of bloody mucus with some clots. I believed the hæmorrhage to have been checked. Gave enema of milk and whisky. Nausea seemed to be controlled by swallowing small pieces of ice. In the morning ordered tincture of chloride of iron, 10 drops in water every four hours, and if vomiting of blood recurred, a teaspoonful to be given immediately. There was apparent improvement during Sunday and Monday; no food being given by the mouth. Tuesday morning she seemed so much stronger I yielded to her entreaties and allowed her to have every hour a dessertspoonful of oyster broth which was nearly all milk. In addition ordered 2 drops of Fowler's solution every four hours. Tuesday evening more blood was vomited. She was given a teaspoonful of the tincture of iron, which seemed to increase nausea and was returned after a few minutes. She remarked that iron always did make her sick.

During Wednesday and Thursday she was fed entirely by the rectum, milk or milk and egg, with whisky and deodorized opium at times. Iron was continued in 10 drop doses. During Friday and Saturday she had beef essence in ice-water by the stomach. There was no further vomiting until about midnight Saturday. I saw her about 1 A.M. She vomited before and immediately after my arrival, nearly one-third filling the ordinary vessel. The teaspoonful of iron that was given her was almost immediately returned. Dr. Busey saw her with me on Sunday and Monday. Treatment was continued except that beef-tea was given by rectum, and teaspoonful of milk and lime-water half and half every half-hour by stomach. Monday evening she grew weaker, and when I saw her at 1 A.M. was evidently nearing her end. Her mind wandered at times, and at 5 A.M. she grew violently delirious, screaming out and taxing her father's strength to keep her in bed. This attack soon passed off and she sank back, rapidly growing weaker and dying from exhaustion at 10 A.M. Tuesday, November 13, twelve days after the first hæmorrhage and fifty-five hours after the last.

DR. D. S. LAMB made the post-mortem examination in this case and reported: Surface everywhere blanched. Body generally bloodless. Right lung normal; some pleuritic adhesions of left. Heart normal. Liver pale. Spleen congested. Pancreas normal. Stomach coated with tenacious mucus; mucous membrane of the posterior wall, one-third the distance between the cardiac and pyloric orifices and within 1 inch of lesser curvature, showed two small ulcers, each less than  $\frac{1}{2}$  inch in diameter; one penetrates to muscular coat and is partly cicatrized; the other of less depth and entirely cicatrized. There was a small diverticulum of ileum. Remaining small and large

intestine normal. Kidneys pale, bloodless. Bladder full of urine.

DR. BUSEY said that this case was of peculiar interest to him for several reasons. The patient had been sick ten days before Dr. King asked him to see her, after she had had several copious hæmorrhages. She was well nourished, but pale and exsanguinated. There was no history of ill-health except slight discomfort after eating, nor of menstrual disturbance or neurotic condition. No hæmorrhage occurred after he saw her, and he was surprised on Tuesday, when he was asked to witness the autopsy. He had not supposed death would occur unless the hæmorrhage recurred. There was no question as to the diagnosis and treatment. The excessive irritability of the stomach was an unusual symptom in such cases. She could not retain anything except water. He was surprised that fatal hæmorrhage should have occurred from an ulcer not more than  $\frac{1}{4}$  inch in diameter. Most ulcers are found on the posterior wall near the pyloric orifice; in this case it was nearer the cardiac opening. All ulcers do not bleed. It was the site and not the size of the ulcer which caused the fatal hæmorrhage in this case. The hæmorrhages were not more copious than frequently occurs, but were more frequent. As death occurred fifty-five hours after the last hæmorrhage, it must have been from exhaustion. She was nourished by the rectum. Death is due to either of the following conditions in their order of frequency: Perforation, hæmorrhage, exhaustion and complications. Ulcers do not usually occur in women as well nourished and as robust as this one seemed to be. Judging from the macroscopic appearances and the history the ulcers were of recent formation.

DR. A. C. ADAMS: Was the ulcer near a large vessel? The arterial supply of the stomach is very extensive. He had had a case of hæmatemesis in which the patient vomited two ordinary cuspidors of blood, with only slight recurrences, and recovered—much to his surprise. In a case of typhoid fever in a woman the hæmorrhage lasted five days and the patient recovered. If the ulcer is away from a large vessel is it not very probable that the blood comes from some other part?

DR. EDÉS: The case reported is very interesting. He had lost several cases of ulcer of the stomach, one of which resembled this. In one a man was taken with profuse hæmorrhage on the street and died in a day or two. At the autopsy it took some time to find the ulceration. It was found to have perforated a large vessel leading to it. In another case a woman had an enormous hæmorrhage and recovered. There are so few symptoms in such cases; they may have a history of gastric disturbances for a long time. Many get well without hæmorrhage, which, when it occurs, is accidental and caused by the ulcer cutting into the blood-vessel.

DR. W. W. JOHNSTON: Ulcer of the stomach is no doubt more common than we suppose. It is very probable that some cases which appear to be simple gastralgia are really gastric ulcers. The frequency of unrecognized gastric ulcers is proved by autopsies. A large number of healed gastric and intestinal ulcers were found at Prague without any recorded symptoms to account for their presence during life. Hæmorrhage is not a necessary symptom and occurs only in those cases where the wall of a blood-vessel is necrosed. As to the etiology, it has been shown by experiments upon animals that hot ingesta, and injuries from heavy weights and blows will produce ulcers of the stomach. From such causes hæmorrhage may take place into the submucous tissue with arterial thrombosis. If the thrombus occludes the nutritive vessel there will be ulceration. As to symptomatology, he had seen a number of cases of excessive hæmorrhage from the stomach without pain. Gastric ulcers can develop and heal without producing any characteristic symptoms, and autopsies show, and if we treated obstinate cases of gastralgia and cases of hæmatemesis on the theory that small gastric ulcers, such as are seen in this specimen, exist we might have much better results.

DR. LAMB: The stomach was thickly coated with a tenacious mucus. If the stomach were examined more carefully ulcers would be more frequently found. In cirrhosis of the liver fatal hæmatemesis frequently occurs without any disease of the stomach. In one case of fatal hæmatemesis he found a shallow ulcer near the œsophagus, which he might have lost sight of except for the great care in removing the tenacious mucus. He had no opinion to offer as to the cause of the ulcer in this case; it was situated near the gastric artery and probably one of its large branches ruptured.

DR. CALDWELL gave the history of a case. A girl, aged 16, had a number of serious hæmorrhages; on several occasions she vomited at least an ounce of blood; and once he saw two ounces. She had pain on swallowing, which she located near the stomach. Astringents and liquid diet were ordered. After this she frequently complained of food stopping at a sore spot and distressing her. Once at dinner, while masticating a piece of meat she laughed and the bolus was swallowed and lodged at this sore spot and gave her the most excruciating pain. He found her making efforts to vomit. He passed the œsophageal tube nearly to the cardiac end of the œsophagus where it met with a resistance; by firm pressure he succeeded in pushing the tube past the obstruction. There was a partial constriction which he relieved and she has not had any trouble since. This was probably a case of ulcer of the œsophagus.

DR. SELLHAUSEN asked Dr. King if his patient

had had rheumatism. If so, vegetations might have formed on the valves, which subsequently were washed off, swept along in the blood current and form a thrombus in the nutritive artery of the stomach and thereby caused ulcer.

DR. KING had learned since the patient's death that some years ago she had had rheumatism.

DR. CHARLES E. HAGNER: It is very important in such cases to make a correct diagnosis. Excessive hæmorrhages frequently occur without ulceration of the stomach, as where men had been on prolonged debauches. He had seen cases of this character. One at Willard's Hotel vomited over a gallon and recovered; another died. In both there was cirrhosis of the liver. Excessive mucus may be produced by morphia. In a case he suspected ulcer and tried to diagnosticate it by the galvanic current, but failed. If the ulcer can be located by this method it is a nice way to diagnosticate it. He did not think a diagnosis could be made with certainty between ulcer and cancer of the stomach by the microscope. Some time ago a microscopist diagnosticated cancer of the stomach, having found cancer cells in the vomited matter, but the woman got well and has gained in weight ever since and is now a robust woman. We should exercise the greatest care in giving opium to relieve the pain in cases of ulcer of the stomach lest we create the opium habit. After awhile these patients become so accustomed to taking morphia that they suffer for the want of it. These pains can usually be relieved by Parish's camphor mixture. The hypodermatic administration of morphia nearly always produces a pain in the pit of the stomach, like gastralgia.

DR. LAMB: The heart was normal and gave no evidence of rheumatic endocarditis.

DR. REYBURN: Such cases should be fed by the rectum for a long time, and it would be surprising how long life could be maintained by this method. He cautioned the members against administering morphia too freely and stated that the physician would soon become the slave of the morphia taker.

DR. HOEHLING had had some personal experience with hypodermatic injections of morphia and they always produced in him the pain referred to by Dr. Hagner.

DR. A. F. A. KING had never seen the patient before this illness, and knew little about her previous history. He has since learned from her family that she had last summer attacks of pain after eating. She complained of a slight pain in the right shoulder, which was relieved by paregoric and deodorized tincture of opium. The iron nauseated her very much. He was surprised at her strength; a few hours before death it took great force to keep her in the bed.

DR. CHARLES E. HAGNER presented the specimen and gave the history of a case of



## CALCULUS SUBLINGUALIS.

A child, æt. 7, had a swelling about the size of a pigeon's egg beneath the lower jaw, which was very painful. Domestic remedies were tried and he was called in on account of fever. There was tenderness in the submaxillary region over the tumor. He gave an anodyne lotion and a febrile mixture. The child was not any better the next day, so he examined Wharton's duct and felt a hard substance. He removed two calculi, which were followed by a little pus. There was no further trouble. He reported this case because he thought it was unusual to find a calculus in such a young child in this location. About two years ago he had reported a case of a young lady who noticed a swelling under the ramus of the jaw every time she ate acids. He gave her vinegar and a painful swelling immediately appeared, which he attributed to congestion. Dr. Thompson saw this case with him. Dr. Hagner removed a large calculus from this patient.

## Gynæcological Society of Chicago.

*Regular Meeting, Friday, Dec. 21, 1888.*

THE PRESIDENT, CHARLES T. PARKES, M.D.,  
IN THE CHAIR.

DR. W. W. JAGGARD showed

THE UTERUS, ADNEXA, KIDNEYS AND  
URETERS

recently removed from the body of a *Iipara* that had died of eclampsia twelve hours after delivery. The specimens had been placed at his disposal through the courtesy of Dr. Fred. Jenner Hodges, of the resident staff of Cook County Hospital. The patient entered the hospital a few days before confinement; albuminuria was noted. The course of labor was normal; the first convulsion occurred after delivery.

Dr. Jaggard wished to direct the attention of the Fellows to the characters of the cervix uteri that he thought were in full harmony with the views of Bandl. He begged to make a complete report at the February meeting, when it was proposed to discuss the subject of puerperal eclampsia.

DR. HENRY T. BYFORD presented

A VAGINAL OVARIOTOMY TROCAR.

This instrument is designed to supply a want I have felt in the removal of ovarian cysts through the vagina. It is practically a curved canula with a little shield and stopper on the end which directs the fluid into a vessel. When the recto-uterine cul-de-sac of the peritoneum is opened the tumor is held by a hook while the slightly sharpened end is thrust into it. If the fluid be thick the stopper may be taken out.

## CYSTO-FIBROMA OF THE OVARY.

The microscopic examination made by Dr. Frank Cary proves this to be a fibro-cystic tumor of the ovary. It was the size of an adult head, and very irregular in shape. The cysts, which made up about three-quarters of its volume, are clustered about an irregular white glistening fibrous mass at the pedicle. The cyst walls are thick and fibrous near the center, but become membranous at the circumference. That the pedicle became twisted some months before the operation seemed probable from the symptoms, and is testified to by this large blood-clot in the largest cyst, by the dark color of the cystic wall and coagulated fluid, and by the extensive inflammatory adhesion or fusion of the omentum with this portion of the tumor. The uterus has also undergone fibroid degeneration, and is the size and shape of a pineapple. I left the uterus and removed the other ovary, which was somewhat large and vascular. I operated October 22d, at the Woman's Hospital, and discharged the patient apparently strong and well four weeks later. She was 40 years old, unmarried, had had symptoms of the tumor for fifteen years, such as incessant backache and pain in the abdomen. The menstruation was regular, and, contrary to what might have been expected, the flow was scanty.

## OVARIAN PREGNANCY.

I have also brought some specimens from the practice of Dr. William H. Byford. It appears to be a case of ovarian pregnancy in which the sac was intact and developed down between the layers of the broad ligament. The tube was entirely separate from the sac, and on the opposite side of the ovary. The foetus was macerated, and, although it formed a beautiful specimen at the time, has partly fallen to pieces. There was a small cyst in the other ovary, which you will find on the same platter.

History: Mrs. B., American, æt. 34, wife, married sixteen years. One miscarriage fifteen years ago. One child 14. Entered hospital May 19, 1888. Seven years ago, after an illness of several weeks, during which time she was confined in bed, and suffered much pain, she passed a fleshy substance, pronounced by attending physicians to be a false conception. Since that time, about every two years she has had periods of flowing for days or weeks at a time. Health between these periods as good as usual. About one year ago she missed two menstrual periods; was then taken sick, had severe hæmorrhage from uterus, and was confined to bed for two or three weeks. Since then until she entered hospital, has menstruated every two or three weeks, and flowed profusely at such periods. Diagnosis, granular endometritis, lacerated cervix, small fibroid tumor in posterior wall of uterus, enlarged ovaries. Was curetted a few days after entering

hospital. Trachelorrhaphy was performed about four weeks later. Operation a success. Seeming much improved, in July she was discharged. At St. Paul, on her way home, began to flow again, and returned to hospital. Fld. ext. ergot was given in twenty-drop doses four times daily. August 1, she was again curetted, but did not receive much benefit from this operation. The ovaries were removed November 12. Smooth recovery.

#### FATTY TUMOR OF THE SUPRARENAL CAPSULE.

The specimen I now wish to describe is a supposed fatty tumor of the supra-renal capsule, but it was unfortunately allowed to spoil and cannot be exhibited. Mrs. Silva Walker, Pataha, W. T.; æt. 38; American. Married twenty years; has had five children, eldest 19, youngest 10. No miscarriages. One year and a half ago first noticed increase in size of abdomen in right side and through pelvis. Slight backache. Size increased very rapidly the last six months. Menstruation regular and normal. She was operated on November 25, 1888, and is getting well. This, I believe, is the only fatty tumor of the supra-renal capsule which I can find on record that has been removed before death. A few have been discovered at autopsies. It weighed twenty pounds. As it filled the abdomen so completely, even pressing down the uterus, its place of origin was not determined before the operation. A feature of importance in the case was the manner in which the growth was removed. It was enucleated from the capsule, and the capsule sewed with catgut and trimmed so as to make a canal from the bed of the tumor up to the external abdominal walls. The edges of this canal or sac were sewed into the abdominal wound so as to shut off the abdominal cavity; the bed of the tumor was thus treated extra-peritoneally. The kidney was removed. Whether it might have been safely left or not is a debatable question; the chances were it would have undergone inflammatory changes. Its vessels were ligatured, and the ligatures left in the capsule. A large exposed vein, at the bottom of the cavity, was clamped with hæmostatic forceps, and a large bleeding surface, on the under aspect of the diaphragm about the normal attachment of the supra-renal capsule, was gathered together in the blades of two long hæmostatic forceps. The forceps were taken off at the end of thirty hours. The patient has done very well since. The tissues, which were caught in the bite of the forceps, have sloughed out, and the cavity is healing. The other kidney secretes twenty to forty ounces of normal urine a day.

DR. PARKES: How did you come to settle definitely that this tumor grew from the supra-renal capsule—why not from the post-peritoneal fat for a basis?

DR. BYFORD: The supra-renal capsule was not

found, but this tumor was attached to the under surface of the diaphragm where the supra-renal usually is. The tumor now developed above and over the anterior surface of the kidney, and did not lift the kidney forward, but rather held it back in place. There was no indication of unusual fatty development in any of the tissues about. The firmness of the capsule and its relations after enucleation favored my view. A post-peritoneal fatty tumor about the kidney would have more lateral attachment, and, I think, develop more down the side into the iliac fossa; whereas this one, which was freely movable, pressed down in the centre of the pelvis so as to give the impression at first that it was attached to the uterus. All these facts have led me to consider the supra-renal capsule as the starting point.

#### CYSTO-FIBROMYOMA OF THE UTERUS.

The last specimen I have to show is a fibro-cystic tumor of the uterus weighing 30 lbs. It was surrounded by 45 pints of ascitic fluid, so that the patient was relieved of 75 lbs. of weight by the operation. What was left of her weighed about 90 lbs. On the right side is a plain fibroid growth; on the left side it has undergone myxomatous degeneration. A peculiarity is that the uterine cavity is completely obliterated  $\frac{1}{2}$  inch below the normal-sized fundus by the tumor, and begins again lower down. The patient was about 44 years of age and menstruated scantily. The tumor, which is known to have been growing over fifteen years, started below the fundus in the posterior uterine wall. The broad ligaments were ligated separately, and the uterine stump treated extraperitoneally. This is the sixth day since the operation. There has been but little reaction, the drainage tube is about dry, the patient is hungry, and has commenced to direct the household affairs. Flatus passed freely from the beginning. Formerly, when I was an adherent of the intra-peritoneal method of treating the stump, I stood in great awe of abdominal hysterectomy for fibroids, but since adopting the extraperitoneal method I find that the mortality is but little greater than after ovariectomy.

I would like to say that I have been found fault with for failing to bring microscopic slides of my specimens, or reports of pathologists upon three cases of alveolar sarcoma of the uterus, reported at the September meeting of this Society, and that my diagnosis was called in question. In my anxiety to take up as little of your valuable time as possible, I suppose that I must have omitted to state that, in the two cases shown, specimens were obtained by curettement a week before I removed the uteri, and were examined by pathologists—that from Mrs. M. by Dr. L. L. McArthur, that from Mrs. Sh. by Dr. M. J. Mergler. In the case referred to, in which the uterus went to

pieces during removal, Dr. Doering, who was the family physician, had the specimen examined by a pathologist. The fourth case I casually mentioned was diagnosed by Dr. McArthur from specimens I obtained by curettement. In the case of sarcoma of the ovary, Dr. Bayard Holmes was my authority.

THE PRESIDENT: I have had under my control lately a large tumor of the abdomen. I decided that it was behind the intestine, because there was one channel passing over the surface of the tumor, in which one could get a gurgling sound and something that resembled the displacement of gas. That indicated that the intestine was in front, and so it proved. It was a pancreatic cyst.

DR. W. W. JAGGARD: The Society is to be congratulated upon the presentation of so much valuable pathological material at this particular meeting. I have been specially interested in the case of alleged ovarian pregnancy. Without for one moment questioning the accuracy of Dr. William H. Byford's diagnosis, I beg to remind the Fellows that cases of ovarian pregnancy are very rare. Werth has demonstrated the tubal origin of many of the cases recorded as ovarian. As an essential criterion of ovarian pregnancy, the possibility of the participation of the corresponding tube in the sac must be excluded. In the specimen, as it has been presented to-night, it is impossible to exclude the participation of the tube in the sac.

THE PRESIDENT: I remember seeing a few years ago, in the office of Dr. Murphy, of St. Paul, a specimen of a uterus and both ovaries removed after death. In one ovary there was a foetus. The Fallopian tube and all were present.

DR. W. W. JAGGARD read a note on

#### TWO OBSERVATIONS OF TYPHOID FEVER DURING PREGNANCY.

I report the two following examples of typhoid fever during pregnancy, both on account of the intrinsic interest of the case, as well as to bring out the experience of others with this complication. Typhoid fever is of very frequent occurrence in Chicago, and the Fellows that have resided in the city for a considerable period, can doubtless supply important facts that bear upon the reciprocal relations of this disease and pregnancy.

*Observation No. 1.*—This case was observed and described by my friend, Dr. William M. Findley, of Altoona, Pa. Mrs. M. H. Y., æt. 24 years, of Irish extraction, whose husband had been ill some six weeks with typhoid fever, was, after the initial prodromata, taken down with well-marked typhoid fever, May 7, 1873. Temperature and pulse ranging high in evening, with epistaxis, and diarrhoea early. The case would not have attracted unusual attention except for the fact

that she was pregnant, and her labor was anticipated on May 10, 1873. She, however, was not taken in labor until May 15. On the evening of May 14, I was called about 9 P.M., after my regular visits for the day, and found her condition as follows: Temperature 103°, pulse 140, respirations 36, with marked bronchial irritation and secretion—having had six characteristic stools during the day in spite of remedies—and the contractions of the uterus quite strong and regular, os dilated to a half-dollar piece size and dilating. The heart being very feeble, and jactitation marked, with exhaustion coming on rapidly, I gave her, *ad libitum*, best port wine and brandy, so that in the four or five hours of labor she took a quart of brandy, and about as much more port wine, with no other effect than to keep her in the same condition as I had left her before labor came on. In due time the labor was terminated, contraction was perfect once the product of conception was expelled completely, and no untoward results followed. Although during the labor her bowels were moved copiously some six or eight times, after labor the bowel trouble seemed to subside, and she passed on to convalescence in some three week without marked irregularities, as in an ordinary case of uncomplicated typhoid fever. The secretion of milk was entirely suppressed, the mammary glands never showing any signs of activity during her illness.

The condition of the child, however, was remarkable. The entire cuticle or epidermis was shrivelled and creased as though it had been macerated in hot water, and in a day or two it was covered with bullous spots from head to foot, vesicular first, then pustular. As the boy was healthy in other respects, in the course of a week or ten days the eruption under emollients was well, and the cuticle becoming detached, was replaced by a healthy skin tissue and the baby was well, except that as a young man he carries the cicatrices of some of the bullæ.

*Observation No. 2.*—This case came under my own observation. From the history of the case, written by Dr. B. L. Riese, I make the following extracts:

Mrs. A. McG., 23 years old, married June 17, 1888. Last menstruation June 10, 1888. Morning sickness six weeks after marriage. Husband and wife taken sick with typhoid fever about the 28th of August; both admitted to Mercy Hospital, September 4th. Husband died a few days later of a malignant type of the disease. In the case of the wife, the disease pursued a typical course, lasting about three weeks; maximum temperature, 103.4° F.; maximum pulse 130. October 1st, several days after the subsidence of the fever, severe pains referred to the hypogastric region, hæmorrhage from the vagina. After irrigation of the vagina, examination revealed the vaginal portion softened and the ovum presenting

The answer would be, First, to save life; and second, to make a useful limb. Now, we can save life as easily by one method as by the other. Why not then operate solely for the best interests of the patient? In an amputation of the leg all that is left below the middle of the middle third of the leg is useless and in the way, and gives that much more room for ulceration and friction sores. Let me tell you, gentlemen, these are weighty considerations in an amputation, for they compel the wearer of an artificial limb either to endure great suffering or to leave the artificial limb off, as I can abundantly testify from personal experience. Nearly three-quarters of a century ago, Gibson used the following language: "As much as possible of the thigh should in all cases be saved. But the rule does not always hold good in amputations of the leg. If, for example, the leg be amputated just above the ankle, the bone, from the deficiency of surrounding muscle, cannot be well covered, and is therefore not calculated to bear the pressure of an artificial leg. On this account the patient is obliged to have an instrument of the kind adapted to the knee, and the leg, therefore, is carried out behind at right angles with the thigh and by its weight greatly incommodes the patient, so much so, indeed, that I have known two or three to submit to a second operation, for no other reason than to get rid of the incumbrance." This Dr. Gibson gives as his professional experience. I personally know of a number of re-amputations for no other reason than the suffering, discomfort, or absolute impossibility of wearing an artificial limb upon a long stump. After the application of an artificial limb there is a constant diminution in the size of the stump. Its nutrition being continually interfered with, and the parts being of low vitality, consequently, when we have ulceration or friction sores or injuries of any kind, it is with great difficulty that they are induced to heal.

There is another element to be taken into consideration. As soon as the artificial limb is left off, and the patient assumes an upright position, the limb is greatly enlarged by a species of œdema which takes place immediately, leaving the parts in no condition to heal. The limb has the feeling of being cold and almost lifeless, and if exposed to cold it would be the first to freeze. It is almost impossible to keep the amputated limb warm.

When the artificial one is left off, amputations through the knee-joint give in many cases a very bad surface to bear the weight of the body, and a leg is rarely worn with comfort. Such an amputation absolutely prevents the application of a full-lengthed limb, as the knee-joint would have to be lowered some three inches for want of room, making at best a useless appliance. Amputate therefore—if it is a matter of selection—through the lower third of the thigh. An amputation below the middle of the leg is objection-

able on account of the length of the stump, which presents occasion for ulceration and is difficult to dress properly so that the limb may be worn with comfort. Every inch of stump over five or six inches below the knee involves that many hundreds of hours of suffering and distress to the patient. The additional chance of life does not add one feather's weight in favor of the long amputation. Amputation at the lower third does not give sufficient room for a strong ankle-joint, and, therefore, adds greatly to the wear and tear of the limb, thus adding largely to the expense. Amputations through the ankle may give the patient something to walk on, but this is oftentimes accompanied with great pain. It often gives him a poor excuse for a limb, and completely prevents any mechanical appliance from aiding him in the least, and forever prevents him from hiding his terrible deformity. If ever there was an appliance to which the term "slipshod" could be appropriately applied, it is to those intended to imitate nature in these cases. The usefulness of an artificial limb is in proportion to the simplicity and completeness of its mechanical construction. The nearer it resembles the human limb in all its parts, the more perfectly it fills its office. There is one fact associated with these cases to which but few of you, perhaps, have given a thought: that is the ever present and painful consciousness of physical deformity which the patient has, and the fact that his maimed condition closes to him many avenues of honorable, useful, and lucrative employment. This applies especially to the case of civilians; to the soldier it is different; to him the loss of part of a limb is unchallenged testimony of gallant and heroic sacrifice.

DR. L. K. BALDWIN: I have been much interested in the remarks of Dr. Price, partly because a gentleman called at my office this afternoon and asked me to look at an abrasion on the stump of amputated limb. The amputation had been performed at the junction of the middle and lower third. It was just such a stump as I thought that he ought not to have had. The operation was performed ten or twelve years ago, and although he has worn a number of legs, the stump is always getting rubbed. The remarks of Dr. Price in regard to amputations near the joint are very good. There is no one more capable of speaking upon this subject than Dr. Price himself, for there is nothing like practical experience. His remarks are worthy of all consideration, and it would be well if they were followed out.

DR. JAMES COLLINS: I have listened with a great deal of earnestness to the remarks of Dr. Price on this question. He comes rich in that experience of suffering that makes men wise. I therefore attach great weight to his words. I could, however, but think that while the doctor is entirely right in his opinions, he may have for-

gotten the lectures given at the time he graduated. I have heard the professor of surgery say, and have seen him demonstrate, that the point of election for amputation of the leg was three finger's space below the tubercle of the tibia. I think it well to mention this, and while I admit the great advances which have been made in surgery, yet, I think, that we should not cut entirely loose from all that has been done in the past. With reference to what has been said in regard to long stumps, I think that the surgeons of twenty years ago were deluded by the promises of the artificial limb makers. The artificial limb makers made demonstrations before classes in surgery, and led the surgeons to believe that if they had a certain form of stump they could apply the limbs better. They described their wonderful limbs that could almost walk without a man attached to them, and thus to a certain extent deceived the surgeon.

DR. O. H. ALLIS: I would ask Dr. Price if in a case of injury to the foot, he would take off the limb, say at the tarso-metatarsal joint, or go to the point of election below the knee?

DR. M. PRICE: I should prefer to operate at the point of election. I think that even in an injury which would require amputation of the great toe, the patient would be more comfortable and walk better if the limb were taken off below the knee, although I do not say that I should do it.

(To be concluded.)

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*Progressive Muscular Atrophy—Tumor of the Cerebellum—The Pathology of Spasm—Death of Dr. John C. Dalton—The Middleton Goldsmith Lecture.*

Dr. Landon Carter Gray, who has recently been elected Chairman of the Section on Neurology of the Academy of Medicine, presented at the last meeting of the Section a remarkable case of *Progressive Muscular Atrophy*. It was an instance of the so-called *juvenile type* of this affection, as described by Erb, of Heidelberg, in 1884, and he said it was the finest case—indeed the only pure case—that he had ever seen. The limitation of the atrophy and hypertrophy was exactly as described by Erb. He believed that this was the first case that had been described in this country, although a case of Dr. Putzell's, given in the "Reference Note-book of the Medical Sciences," was very closely akin to this type; differing, however, in the distribution of the atrophy, in the presence of marked sensory symptoms, and in the onset of the disease with slight cerebral symp-

toms. Dr. Gray did not hesitate to say that he had but little faith in this matter of type-making, because of the failures of the predecessors of Erb in this line, viz.: Hemptenmacher, Eichhorst, Zimmerlin, Leyden, Moebius, and others. He then went on to speak at some length of his reasons for believing that this type often merges into others.

Dr. J. Arthur Booth then read a report, illustrated with drawings, of a most interesting case of *Tumor of the Cerebellum*. It was a case which he saw in consultation, the patient being a girl 10 years of age, and one instructive point about it was that at first the diagnosis of tubercular meningitis was made. Tumor of the cerebellum was considered, but the absence of optic nerve changes and the presence of an elevated temperature with irregular pulse seemed to indicate the disease mentioned.

When 3 years old the girl had a fall down a flight of steps, striking her head on the stone walk, and the earlier symptoms of her last illness, which began nine or ten months before her death, consisted of loss of flesh, indisposition to exertion, irritability of temper, attacks of headache and vomiting, and more or less pain in the back part of the head and neck, principally on first waking in the morning. It was also noticed that she carried her head as though the neck was somewhat stiff. When first examined by Dr. Booth, about six months before her death, she was found to be dull, listless, very weak, and suffering from severe head pain. There was marked sensitiveness to touch all over the head, and especially just below the occiput, and the posterior cervical glands were quite large. Vision was apparently normal and there were no changes shown in the fundus by the ophthalmoscope, while the temperature was 105.6 and the pulse was irregular.

Within a week, however, commencing optic neuritis was detected, and shortly after this the patient was attacked with convulsions, which recurred five or six times a day. These consisted of tonic spasm of the limbs and drawing up of the right side of the lip and nose; the right eye being tightly closed and the left wide open. Consciousness, however, was rarely entirely lost. The symptoms were now regarded as pointing to the presence of intracranial, and probably cerebellar, growth, and the patient's condition gradually worse until about a month and a half before her death, when she became totally blind and the ophthalmoscope showed advanced atrophy of both optic nerves. At this time she lay most of the time in a semi-comatose state and had occasional attacks of *petit mal*. There was now paralysis of right side of face, partial paraplegia, and paresis of the left arm, and the following bullar symptoms had also appeared: impaired articulation, difficult deglutition, and polyemia. There

had been for some time a gradual enlargement of the head, and during the last two or three weeks of life some separation of the coronal sutures was noticed.

At the autopsy the whole head was found very much enlarged, and the frontal and parietal bones were very thin and separated at the sutures to a marked degree. The dura mater was very thick and distended, and on puncturing it a large quantity of clear fluid gushed out. The convolutions were flattened, and the whole brain was pale, flabby and softened. The lateral ventricles were much dilated and contained a large amount of fluid; while the medulla was compressed and softened. Directly between the lateral lobes of the cerebellum there was found a large nodular growth, 3 inches long,  $1\frac{1}{4}$  inches wide, and  $1\frac{1}{4}$  inches in its vertical diameter. It was attached to the right lobe, occupying quite an extensive hollowed-out space in the lobe, and also extended into the fourth ventricle, pushed the medulla to the left, and pressed upon the right crus of the cerebellum. The microscopic examination of the tumor showed a large number of spindle cells, medium in size, imbedded in an abundant granular and fibrillated stroma, with a rich vascular supply. The walls, being composed of embryonic tissue, were quite thick, and gave the growth the appearance of angio-sarcoma.

The principal paper of the evening was by Dr. Graeme M. Hammond, on *The Pathology of Spasm*. On this occasion he treated of spasm of cerebral origin and due only to undoubted organic lesion; reserving the consideration of the subject of spasm in all its details for a subsequent paper which he has in contemplation. Having remarked that the only two forms which we could recognize at the present day were tonic, or spastic spasm, and that known as clonic, or mobile spasm, in which the muscles are either the seat of regular or rhythmic contractions (tremor), or are affected with incoördinate, irregular movements, variously designated as chorea, athetosis, and ataxia, he said that in regard to the seat of the pathological lesion in the former, all the authorities were agreed, viz.: that it must be in the white conducting fibres of the motor tract. In regard to the situations of the pathological lesions of mobile spasms, however, the authorities were more or less at variance in their opinions; and having referred to the views of Demarge, Sharkey, Kohler and Pick, Stephan, Charcot, Nothnagel, and others, he said that it was in the hope of throwing a little more light on a subject thus clouded in obscurity that he had undertaken the present investigation.

After some preliminary remarks on the selection of cases he took up each variety of mobile spasm separately, commencing with paralysis agitans. In considering this affection, as all the other varieties of this form of spasm, except that

due to disseminated sclerosis, he said that he had carefully excluded all those cases in which the lesions were so extensive as to make the cause of the spasm a matter of doubt. He then described the lesions found after death in various cases reported by Demarge, Hamilton, Parkinson, Oppolzer and others, and went on to say that of other cases of paralysis agitans which he had found recorded with autopsies, in some no lesion whatever could be detected, while in others multiple lesions were observed occupying the central ganglia, internal capsule, pons and spinal cord.

In disseminated cerebral sclerosis he said it was very difficult, from the very multiple nature of the disease, to find cases where the symptoms of tremor on voluntary motion only could be attributed to an isolated lesion; yet a few cases of this description were on record. Having referred to cases by Demarge, Gray and Sharkey, he mentioned one of his own, not yet reported, in which the patient began to notice that the left hand was gradually becoming weak and anæsthetic. Shortly afterwards tremor was observed whenever he attempted to use the arm; and these symptoms slowly increased until, in about a year's time, the arm became useless from paresis, anæsthesia and tremor. The patient died of pneumonia, and the autopsy revealed a spot of softness in the posterior-internal portion of the optic thalamus. Many cases, he said, had been observed of lesions scattered throughout the white matter of the brain, without involving the cortex or basal ganglia; but in all these either there had been no tremor present, or else the lesions involved the cell area of the pons.

In regard to the pathological anatomy of athetosis Dr. Hammond stated that he had seen no reason to change the views expressed in his paper on that subject read two years ago before the New York Neurological Society, in which he reported nine cases of athetosis with autopsies. In three the lesions were confined to the corpus striatum, and in two to the optic thalamus. In three cases both these ganglia were involved, and in two the lesion was in the cortex, in the motor region. To these cases three more, collected by Stephan, could be added. In the first two there was softening in the optic thalamus, and in the third the lesion involved both the thalamus and the posterior part of the internal capsule. Similar lesions had been observed in chorea of cerebral origin, either pre- or post-hemiplegic. Mitchell reported two cases in which the lesion was found in the corpus striatum on the opposite side, and Charcot three cases, in the first of which the lesion was situated in the posterior extremity of the optic thalamus, while in the second and third the posterior part of the caudate nucleus and the posterior part of the internal capsule were involved. Similar cases had been reported by Demarge, Raymond, Stephan and others.



The pathological anatomy of cerebral ataxia was in no wise different from that observed in athetosis and chorea. Gower reported a case in which the lesion was found in the left optic thalamus, and Demarge five cases in which the lesions were in the left lenticular nucleus, optic thalamus, and internal capsule, and in the right optic thalamus. Other cases, reported by Reymond, Charcot and others, only added to the number of cases without indicating any other situations of lesions.

Taking these cases together, he said, it could readily be seen that in all of them, without exception, the lesions were found constantly in three areas, viz.: the cortex, the optic thalamus, and the corpus striatum. In a careful examination of all cases it would also be found that when the anterior two-thirds of the internal capsule were involved spastic spasm was invariably present. In a case of Sharkey's, classified under the heading of disseminated sclerosis, which, beginning with tremor on one side, soon passed into a condition of spastic spasm, while a gradual onset of tremor occurred in the other side, both optic thalami were found involved, but only one internal capsule. Sharkey regarded all the symptoms as attributable to invasion of the internal capsule; but Dr. Hammond was of the opinion that only the spastic spasm, which was confined to one side, had been produced by the lesion in the internal capsule, while the bilateral tremors were due to the implication of the optic thalami.

In conclusion, he said that from a study of these cases he could not agree with Demarge and Sharkey that mobile spasm may be due to irritation of any part of the motor tract, nor with Stephan that the lesion is in the optic thalamus, nor with Charcot that it is in the thalamus and, in addition, the posterior third of the internal capsule; but he believes that it may be produced by any lesion of an irritative nature situated in any part of the brain where nerve cells are located. These cells being located in the cortex, optic thalamus, corpus striatum and pons, the difference in the form of the spasm, he thought, was one of degree, and not one depending on the location of the lesion; and it was impossible, therefore, to differentiate between a lesion of the cortex, optic thalamus and corpus striatum.

The intelligence of the death of Dr. John C. Dalton, whose achievements as a physiologist have done so much to make American scientific medicine honored abroad, will be received with sincere regret throughout the civilized world; and the New York College of Physicians and Surgeons is to be especially commiserated on having lost from its Faculty within the space of a few months three men so preëminent in their respective departments as Dalton, Sands and Agnew. Professor Dalton had not been engaged in teaching since 1883, when he resigned the chair of Physiology, which he had held since 1855, to ac-

cept the Presidency of the College; but his services to the institution with which he had been so long identified have been of the highest possible value during the important time of the erection and fitting up of its present magnificent building and the arrangement of its improved courses of study.

The Middleton Goldsmith Lecture for 1889 was delivered, under the auspices of the New York Pathological Society, in the hall of the Academy of Medicine, February 16, by Reginald H. Fitz, M.D., of Boston, Shattuch Professor of Pathology in the Harvard Medical School; his subject being: "Acute Pancreatitis, with an especial consideration of Pancreatic Hæmorrhage, Hæmorrhagic Pancreatitis, and Subperitoneal Fat Necrosis." It is gratifying to learn that the Pathological Society has been generously provided by the College of Physicians and Surgeons with suitable quarters and a permanent home in the new buildings of the College.

P. B. P.

#### Transactions of the Ninth International Medical Congress.

*Dear Sir:*—There are a number of volumes of the Transactions of the Ninth International Medical Congress on hand, belonging to members who have omitted to notify me of their change of address. On being notified of their present address, the volumes will be sent by express. Very truly yours,

JOHN B. HAMILTON.

## ASSOCIATION ITEMS.

### Section on State Medicine.

The following named gentlemen have promised papers for presentation to the Section on State Medicine at the Newport meeting of the Association:

Dr. N. S. Davis, Chicago, Ill., "The American Medical Association and its Relations to the Public Health."

Dr. F. L. Sim, Memphis, Tenn., "Etiological Relations of Water to Disease."

Dr. H. R. Storer, Newport, R. I., "Volunteer Sanitary Organizations as an Aid to Public Boards of Health."

Dr. W. C. Van Bibber, Baltimore, Md., "Quarantine of the Future."

Dr. John B. Hamilton, Surgeon-General U. S. Marine-Hospital Service; Dr. Henry B. Baker, Lansing, Mich.; Dr. Victor C. Vaughan, Ann Arbor, Mich.; Dr. Oscar C. DeWolf, Chicago, Ill.; Dr. Thos. C. Minor, Cincinnati, O.; Dr. J. R. Briggs, Dallas, Tex.; Dr. Wm. Cabell Rives, Newport, R. I.; have promised papers the subjects of which will be announced later.

It is requested that all gentlemen who intend

to present papers send the titles thereof, together with their name and address to the undersigned.

S. T. ARMSTRONG,

Secretary Section on State Medicine.

U. S. Marine-Hospital Service, New York City, N. Y.

## MISCELLANY.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA announces that the first triennial prize of two hundred and fifty dollars under the deed of Mrs. Wm. F. Jenks, has been awarded by the Prize Committee of the College of Physicians of Philadelphia to John Strahan, M.D., M.Ch., M.A.O. (Royal University, Ireland), 247 North Queen Street, Belfast, Ireland, for the best essay on "The Diagnosis and Treatment of Extra-Uterine Pregnancy." The writers of the unsuccessful essays can have them returned to any address they may name, by sending it and the motto which distinguished the essay to the Chairman of the Prize Committee, Elwood Wilson, M.D., College of Physicians, Philadelphia. The Trustees have made arrangements with Messrs. P. Blakiston, Son & Co., 1012 Walnut St., Philadelphia, for the publication of the successful essay, which will also appear in the Transactions of the College for 1890.

## LETTERS RECEIVED.

N. D. Gaddy, M.D., North Vernon, Ind.; G. Minges, M.D., Dubuque, Ia.; Lambert Pharmacal Co., St. Louis, Mo.; R. J. Dungleison, M.D., Philadelphia; Pa.; P. O. Hooper, M.D., Little Rock, Ark.; F. H. Allen, M.D., Haverhill, Mass.; Wm. C. Woodward, Washington, D.C.; Parke, Davis & Co., Detroit, Mich.; L. C. Moore, M.D., Blue Grass, Ia.; Battle & Co., St. Louis, Mo.; Thos. Leeming & Co., New York; G. F. Cook, M.D., Oxford, O.; Perfection Douche, Albany, N. Y.; Julia B. de Forest, New York; Lehn & Fink, New York; Geo. P. Rowell & Co., New York; A. B. Younkman, M.D., Brenen, Ind.; N. Roe Bradner, M.D., Burlington, N. J.; D. W. Bland, M.D., Pottsville, Pa.; J. H. Eskridge, M.D., Chicago, Ill.; Cyrus Kindreck, M.D., Litchfield Corners, Me.; P. Blakiston, Son & Co., Philadelphia, Pa.; O. C. Franke, M.D., New York; Carl L. Jensen Co., New York. Kent K. Wheelock, M.D., Ft. Wayne, Ind.; H. W. Loel, St. Joseph, Mo.; John J. Miller, M.D., Wellston, Mo.; Reed & Carnrick, New York; J. P. Elliott, M.D., 49 Chambers St., Boston, Mass.; John A. Larrabee, M.D., Louisville, Ky.; John S. Coleman, M.D., Augusta, Ga.; E. F. Wilson, M.D., Columbus, O.; A. M. Crane, M.D., Marion, O.; H. T. Bahnsom, M.D., Salem, N. C.; Kenyon News Agency, Chicago, Ill.; R. Harvey Reed, M.D., Mansfield, O.; Edmund Andrews, M.D., Chicago; I. Halderstein, New York; J. J. Conner, M.D., Pana, Ill.; C. W. Driesbach, Cleveland, O.; W. D. DeLong, M.D., Pikesville, Pa.; S. N. Nelson, M.D., Boston, Mass.; Dr. Woodruff, London, Ont.; M. Northrup, M.D., Port Huron, Mich.; Chas. W. Hitchcock, M.D., Detroit, Mich.; Chas. F. Mason, Harvard University; W. H. Wenning, M.D., Cincinnati, O.; W. J. Conklin, M.D., Dayton, O.; J. W. Gleitsmann, M.D., New York; Mutual Life Insurance Co. of New York; J. G. Carpenter, M.D., Stanford, Ky.; Wm. D. McGowan, Lyconier, Pa.; J. F. McKnight, M.D., Walnut Hill, Ark.; W. C. Wile, M.D., Danbury, Conn.; Union Pacific Railway Co.; P. H. Millard, M.D., St. Paul, Minn.; E. H. M. Sell, M.D., Allentown, Pa.; J. D. Munson, M.D., Traverse City, Mich.; W. N. Yates, M.D., Cincinnati, Ark.; L. H. Dunning, M.D., South Bend, Ind.; D. C. English, M.D., New Brunswick, N. J.; J. R. McDill, Milwaukee, Wis.; J. F. Preston, M.D., Decorah, Ia.; S. Solis-Cohen, M.D., Philadelphia; Scott & Bowne, New York.

## Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 16, 1889, to February 22, 1889.

Major J. V. Lauderdale, Surgeon U. S. Army, is granted leave of absence for one month, to take effect between March 1 and 15 next. Par. 2, S. O. 9, Hdqrs. Dept. of Texas, San Antonio, February 15, 1889.

By direction of the Secretary of War, Capt. Fred. C. Ainsworth, Asst. Surgeon, will proceed to New York City and Brooklyn, N. Y., on public business. Par. 15, S. O. 38, A. G. O., Washington, February 14, 1889.

By direction of the President, Capt. Robert W. Shufeldt, Asst. Surgeon, will proceed to Ft. Leavenworth, Kan., and report in person to Brig.-Gen. Wesley Merritt, President of the Army Retiring Board at that place, for re-examination by the Board, and on the conclusion of his examination will return to this city. Par. 13, S. O. 40, A. G. O., Washington, D. C., February 16, 1889.

By direction of the Secretary of War, Capt. James E. Pilcher, Asst. Surgeon, will repair from Ft. Wood, New York Harbor, to Philadelphia, Pa., on or about February 23, 1889, for the purpose of giving instruction to the hospital corps of the First Brigade National Guards of Pennsylvania. On completion of this duty will return to his proper station. Par. 1, S. O. 4, A. G. O., February 18, 1889.

First Lieut. Henry S. T. Harris, Asst. Surgeon U. S. Army, will proceed to Ft. Davis, Texas, so as to arrive there on or before February 25, and report to the commanding officer thereof for temporary duty. Upon return of Surgeon Lauderdale from leave of absence, Asst. Surgeon Harris will return to the Post of San Antonio. Par. 3, S. O. 9, Hdqrs. Dept. of Texas, San Antonio, February 15, 1889.

## Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending February 23, 1889.

P. A. Surgeon P. M. Rixey, promoted to Surgeon November 27, 1888.

Surgeon Geo. P. Bradily, ordered to hold himself in readiness for duty about March 1 to "Mohican."

Asst. Surgeon Geo. A. Lung, ordered to hold himself in readiness for duty about March 1 to "Mohican."

P. A. Surgeon H. T. Percy, detached from Naval Hospital, Washington, and to the coast survey str. "Patterson."

P. A. Surgeon Robt. Whiting, detached from coast survey Str. "Patterson," proceed home and wait orders.

## Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Four Weeks Ending February 23, 1889.

Surgeon H. W. Austin, to proceed to Green Bay, Wis., as inspector. February 9, 1889.

P. A. Surgeon John Guitéras, granted leave of absence for sixty days, with permission to go abroad. February 13, 1889.

P. A. Surgeon W. A. Wheeler, order to proceed to Cleveland, O., revoked. February 9, 1889.

P. A. Surgeon S. C. Devan, to proceed to Charleston, S. C., Savannah, Ga., and South Atlantic Quarantine Station, as inspector. February 9, 1889.

P. A. Surgeon Eugene Wasdin, to proceed to Charleston, S. C., and assume charge of the Service. February 23, 1889.

## DEATH.

P. A. Surgeon F. M. Urquhart, died at Evansville, Ind., February 14, 1889.

## CORRIGENDA.

In THE JOURNAL of February 16, p. 250, for "Drs. G. T. and G. S.," read *Drs. J. T. and J. S. Carpenter*. The author of the communication was not Dr. D. W. Beard, but Dr. D. W. Bland, of Pottsville, Pa.

THE

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CHICAGO, MARCH 9, 1889.

No. 10.

## ORIGINAL ARTICLES.

### ELECTRICITY AND THE DEATH PENALTY.

*Read before the Chicago Medico-Legal Society, March 2, 1889.*

BY CLARK BELL, Esq.,

PRESIDENT OF THE MEDICO-LEGAL SOCIETY OF NEW YORK.

There has been for more than a quarter of a century in this State a prejudice against the scaffold and the hangman. They that have yielded to the stern exactions of the law, which demands "a life for a life," have felt an almost insurmountable repugnance to the rope. The bungling of a Sheriff's assistant, the negligent or ignorant adjustment of the noose, have often caused such revolting scenes at public executions, as to fill beholders with horror, and add to that ever increasing number, now close to a majority, who demand the entire abolition of the death penalty as a punishment for crime.

The removal of the scaffold, as a factor in the civilization of our century, has engaged the attention of the New York Medico-Legal Society for many years. The first introduction of the subject before that body, was the paper of the eminent French scientist, Ambrose Tardieu, entitled "Diagnosis of Hanging."

The late Dr. Alonzo Calkins read a paper before that Society in September, 1873, entitled "Felonious Homicide; its Penalty and the Execution thereof Judicially," advocating the abolition of death by hanging, and discussing various methods as desirable substitutes.

The discussion was renewed before the Society, by Prof. J. H. Packard, of Philadelphia, who strongly urged the abolition of the hangman's rope, and recommended as the most desirable substitute, death by inhalation of sulphuric oxide gas.

The whole subject was again brought before the Medico-Legal Society in February, 1888, by Dr. J. Mount Bleyer, in a paper entitled "Best Methods of Capital Punishment."

The Legislature of the State, upon the recom-

mendation of Governor Hill in his messages of 1885 and 1886, named a commission, composed of Hon. Elbridge T. Gerry (a member of the Medico-Legal Society), Mathew Hale, Esq., of the Albany Bar, and Dr. Alfred P. Southwick, of Buffalo, to examine the subject and report their conclusions. On January 17, 1888, this committee submitted their report to the Legislature of New York. It is a very exhaustive and elaborate document, too long for insertion here. It gives the history of human punishments for crimes, in earliest times, and in all countries. It enumerates and describes thirty-four different methods in which the death penalty has been hitherto inflicted.

The guillotine is in vogue in nineteen civilized countries, the sword in nineteen, the gallows in three, the axe in one, and the cord in one; while executions are public in twenty-nine countries, and private in seven.

The committee claim and enumerate the following, as facts demonstrated by their inquiry:

"1. That the effort to diminish the increase of crime by the indiscriminate application of capital punishment, to various offenses involving different grades of moral turpitude; or, in other words, by enlarging the number of capital offenses has proved a failure.

"2. That any undue or peculiar severity, in the mode of inflicting the death penalty, neither operates to lessen the occurrence of the offense, nor to produce a deterrent effect.

"3. That from the long catalogue of various methods of punishment, adopted by various nations at different times, only five are now practicably resorted to, by the civilized world. These five are: 1. The guillotine; 2, the garrote; 3, shooting; 4, the sword; 5, the gallows.

"In recommending a change from the present barbarous and inhuman system of hanging, four substitutes are considered: 1. Electricity; 2, prussic acid or other poison; 3, guillotine; 4, garrote."

This Committee do not seem to have considered the proposal made by Prof. Packard, of a painless death by inhaling sulphuric oxide gas in a small room in each jail, nor the Lethal Chamber suggested by Dr. B. Ward Richardson, of London; and they discard the use of the hypodermic in-

<sup>1</sup> Medico-Legal papers, series 3, p. 40.

<sup>2</sup> Medico-Legal papers, series 2, p. 251.

<sup>3</sup> Medico-Legal papers, series 3, p. 521.

<sup>4</sup> Medico-Legal Journal, Vol. v, p. 424.

jection of prussic acid, or other deadly poison ; "as hardly advisable, because against the almost universal protest of the medical profession!"

Their conclusions, after a careful, thorough, able and exhaustive examination of the whole subject are as follows :

1. That death produced by a sufficiently powerful electric current is the most rapid and humane, produced by any agent at our command.

2. That resuscitation after the passage of such a current through the body and functional centres of the brain, is impossible.

3. That the apparatus to be used should be managed so as to permit the current to pass through the centres of function and intelligence in the brain.

The commission suggested other considerations of great public interest, which may be stated as propositions :

1. That the State by the present universal sentiment of mankind, can only justify itself in taking human life, as a punishment for violation of laws, inflicting the death penalty, when necessary, for the safety of Society, and to deter others from the commission of crime.

2. That the State has not the right to torture the criminal, nor to inflict any punishment whatever, in any vindictive spirit, or by way of retaliation for the crime.

The Committee submitted a draft of a bill and recommended :

a. That executions should be private.

b. That the details of the execution should not be furnished to the public press and ;

c. That the bodies should be delivered to medical schools for dissection in aid of science, or be buried in the prison yard.

The idea of punishment for crime, has colored all human laws. Such legislation has been called *punitive* for centuries. These statutes are denominated *penal* in all the Codes.

It is a little more than half a century, since hanging was the penalty in England for more than one hundred statutory offences, many of which are now regarded as trivial. Nearly all of these are abolished ; but we still call the measure of punishment *penalties* and we even say "*the death penalty*" when we discuss it, and use the term "*capital punishment*" for judicial killing.

The value of the report of the Legislative Commission, considered in its broadest and ablest aspect outside the abolition of hanging, and substituting the Electric Current lies ; in claiming that the universal public judgment and opinion of mankind should be recognized by the law making power, declaring :

That the penalty for violations of law, in what are called "capital cases," should not hereafter be regarded or treated as punitive.

That the State does not claim the right of inflicting any punishment upon the homicide, in a

vindictive or retaliatory sense, or as in any degree or view, as "punitive" or "compensatory" for the act committed.

That beyond the protection of Society, the rights of men, and what is called the "deterrent effects" of human punishment, the State has neither the right nor wish to go.

The Medico-Legal Society, by a Committee appointed February, 1888, duly considered the whole subject, and the report of that Committee was made to the body at the March Meeting 1888, unanimously adopted by the Society, and transmitted to the Legislature.

The report was prepared by me and met the approval of the entire Committee and was as follows :

#### REPORT OF THE COMMITTEE ON BEST METHODS OF EXECUTING CRIMINALS.

##### *To the Medico-Legal Society:*

The Committee to whom was referred the subject of the best method of executing the death penalty respectfully report :

That in the consideration of this subject they have considered the several papers read before the Medico-Legal Society by Ambrose Tardieu, Dr. Alonzo Calkins, Prof. J. H. Packard, of Philadelphia, Dr. J. Mount Bleyer, and the report of Hon. Eldridge T. Gerry, Alfred P. Southwick, M.D., and Mathew Hale, Esq., Commissioners, made to the Legislature on January 17, 1888, which were by action of this Society, laid before this Committee at the February meeting.

Your Committee are of the opinion that the Commissioners are entitled to the thanks of the Legislature and the public, for the able and exhaustive labor, they have bestowed upon the subject. Your Committee are of the opinion :

1. That the reduction by legislation in number among civilized States, of what are designated as capital offenses is in accord with enlightened civilization, and that its practical result has been the diminution, rather than the increase of crime.

2. That it should be legally established, by legislative enactments ; that the State in fixing penalties for crimes, has no right to inflict a vindictive punishment upon a criminal, in any spirit of vengeance or retaliation.

That the object and justification of punishment should be to deter others, from the commission of crime.

3. That the provisions of our Constitution "that cruel and unusual punishments shall not be inflicted," should be enforced by appropriate legislation, and all existing statutes repugnant to either its letter or spirit, be repealed.

4. That hanging should be abolished as cruel, and contrary to the public sense of our civilization.

5. That as a substitute for the present death penalty, we would recommend :

1. Death by electric current, or,
2. Death by hypodermatic, or other injection of poison, or,
3. Death by carbonic oxide gas injected into a small room in each jail, as recommended by Prof. John H. Packard (Med.-Leg. papers, Vol. iii, p. 521), giving our preference to the first, or death by electric current.
6. That in our judgment executions, should be private, and not public.
7. That if it were possible, to prevent the publication of details of executions in the public press, it would be a public good.
8. That the bodies of criminals, should be delivered to the medical schools, after execution for dissection.

Your Committee do not pass upon the question, of the propriety of inflicting capital punishment by the State, against which there is strong objection in the popular mind.

The report is intended to be limited to the subjects embraced in the report now before the Legislature of the State, and the papers read before this Society.

R. Ogden Doremus, Clark Bell, J. Mount Bleyer, M.D., Chas. F. Stillman, M.D., Frank H. Ingram, M.D., Committee.

The Legislature of New York passed the following law, which received the approval of Governor Hill.

#### LAWS OF NEW YORK.—BY AUTHORITY.

[Every law, unless a different time shall be prescribed therein, shall commence and take effect throughout the State, on and not before the twentieth day after the day of its final passage, as certified by the Secretary of State. See 12, title 4, chap. 7, part 1, Revised Statutes.]

CHAP. 489. AN ACT to amend sections four hundred and ninety-one, four hundred and ninety-two, five hundred and three, five hundred and four, five hundred and five, five hundred and six, five hundred and seven, five hundred and eight, and five hundred and nine of the Code of Criminal Procedure relative to the infliction of the death penalty, and to provide means for the infliction of such penalty.

Approved by the Governor June 4, 1888. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

SECTION 1. Section four hundred and ninety-one of the Code of Criminal Procedure of the State of New York is hereby amended so as to read as follows:

§ 491. When a defendant is sentenced to the punishment of death, the judge or judges holding the court at which the conviction takes place, or a majority of them, of whom the judge presiding must be one, must make out, sign and deliver to the sheriff of the county, a warrant stating the

conviction and sentence, and appointing the week within which sentence must be executed. Said warrant must be directed to the Agent and Warden of the State prison of this State, designated by law as the place of confinement for convicts sentenced to imprisonment in a State prison in the judicial district wherein such conviction has taken place, commanding such Agent and Warden to do execution of the sentence upon some day within the week thus appointed. Within ten days after the issuing of such warrant, the said sheriff must deliver the defendant, together with the warrant, to the Agent and Warden of the State prison therein named. From the time of said delivery to the said Agent and Warden, until the infliction of the punishment of death upon him, unless he shall be lawfully discharged from such imprisonment, the defendant shall be kept in solitary confinement at said State prison, and no person shall be allowed access to him without an order of the court, except the officers of the prison, his counsel, his physician, a priest or minister of religion, if he shall desire one, and the members of his family.

§ 2. Section four hundred and ninety-two of said Code of Criminal procedure is hereby amended so as to read as follows:

§ 492. The week so appointed must begin not less than four weeks and not more than eight weeks after the sentence. The time of the execution within said week shall be left to the discretion of the Agent and Warden to whom the warrant is directed; but no previous announcement of the day or hour of the execution shall be made, except to the persons who shall be invited or permitted to be present at said execution as hereinafter provided.

§ 3. Section five hundred and three of said Code of Criminal Procedure, is hereby amended so as to read as follows:

§ 503. Whenever, for any reason other than insanity or pregnancy, a defendant sentenced to the punishment of death has not been executed pursuant to the sentence, at the time specified thereby, and the sentence of judgment inflicting the punishment stands in full force, the Court of Appeals or a judge thereof, or the Supreme Court or a justice thereof, upon application by the Attorney-General or of the district attorney of the county where the conviction was had, must make an order directed to the Agent and Warden or other officer in whose custody said defendant may be, commanding him to bring the convict before the Court of Appeals or a general term of the Supreme Court in the Department; or a term of the court of oyer and terminer in the county where the conviction was had. If the defendant be at large, a warrant may be issued by the Court of Appeals or a judge thereof, or by the Supreme Court or a justice thereof, directing any sheriff or other officer to bring the defendant before the

Court of Appeals or the Supreme Court at a general term thereof, or before a term of the court of oyer and terminer in that county.

§ 4. Section five hundred and four of said Code of Criminal Procedure is hereby amended so as to read as follows :

§ 504. Upon the defendant being brought before the court, it must inquire into the circumstances, and if no legal reason exists against the execution of the sentence, it must issue its warrant to the Agent and Warden of the State prison mentioned in the original warrant and sentence, under the hands of the judge or judges, or a majority of them, of whom the judge presiding must be one, commanding the said Agent and Warden to do execution of the sentence during the week appointed therein. The warrant must be obeyed by the Agent and Warden accordingly. The time of the execution within said week shall be left to the discretion of the Agent and Warden to whom the warrant is directed ; but no previous announcement of the day or hour of the execution shall be made, except to the persons who shall be invited or permitted to be present at said execution as hereinafter provided.

§ 5. Section five hundred and five of said Code of Criminal Procedure is hereby amended so as to read as follows :

§ 505. The punishment of death must, in every case, be inflicted by causing to pass through the body of the convict a current of electricity of sufficient intensity to cause death, and the application of such current must be continued until such convict is dead.

§ 6. Section five hundred and six of said Code of Criminal Procedure is hereby amended so as to read as follows :

§ 506. The punishment of death must be inflicted within the walls of the State prison designated in the warrant, or within the yard or inclosure adjoining thereto.

§ 7. Section five hundred and seven of said Code of Criminal Procedure is hereby amended so as to read as follows :

§ 507. It is the duty of the Agent and Warden to be present at the execution, and to invite the presence, by at least three days' previous notice, of a justice of the Supreme Court, the district attorney, and the sheriff of the county wherein the conviction was had, together with two physicians and twelve reputable citizens of full age, to be selected by said Agent and Warden. Such Agent and Warden must, at the request of the criminal, permit such ministers of the gospel, priests or clergymen of any religious denomination, not exceeding two, to be present at the execution ; and, in addition to the persons designated above, he may also appoint seven assistants or deputy-sheriffs who may attend the execution. He shall permit no other person to be present at such execution except those designated in this

section. Immediately after the execution a post-mortem examination of the body of the convict shall be made by the physicians present at the execution, and their report in writing stating the nature of the examination, so made by them, shall be annexed to the certificate hereinafter mentioned and filed therewith. After such post-mortem examination the body, unless claimed by some relative or relatives of the person so executed, shall be interred in the graveyard or cemetery attached to the prison, with a sufficient quantity of quick-lime to consume such body without delay ; and no religious or other services shall be held over the remains after such execution ; except within the walls of the prison where said execution took place, and only in the presence of the officers of said prison, the person conducting said services and the immediate family and relatives of said deceased prisoner. No account of the details of any such execution, beyond the statement of the fact that such convict was on the day in question duly executed according to law at the prison, shall be published in any newspaper. Any person who shall violate or omit to comply with any provision of this section shall be guilty of a misdemeanor.

§ 8. Section five hundred and eight of said Code of Criminal Procedure, is hereby amended so as to read as follows :

§ 508. The Agent and Warden attending the execution must prepare and sign a certificate, setting forth the time and place thereof, and that the convict was then and there executed, in conformity to the sentence of the court and the provisions of this Code, and must procure such certificate to be signed by all the persons present and witnessing the execution. He must cause the certificate, together with the certificate of the post-mortem examination mentioned in the preceding section, and annexed thereto, to be filed within ten days after the execution, in the office of the clerk of the county in which the conviction was had.

§ 9. Section five hundred and nine of said Code of Criminal Procedure, is hereby amended so as to read as follows :

§ 509. In case of the disability, from illness or other sufficient cause, of the Agent and Warden to whom the death warrant is directed, to be present and execute said warrant, it shall be the duty of the principal keeper of said prison, or such officer of said prison as may be designated by the Superintendent of State Prisons, to execute the said warrant, and to perform all the other duties by this act imposed upon said Agent and Warden.

§ 10. Nothing contained in any provision of this act applies to a crime committed at any time before the day when this act takes effect. Such crime must be punished according to the provisions of law existing when it is committed, in.



the same manner as if this act had not been passed; and the provisions of law for the infliction of the penalty of death upon convicted criminals, in existence on the day prior to the passage of this act, are continued in existence and applicable to all crimes punishable by death, which have been or may be committed before the time when this act takes effect. A crime punishable by death committed after the beginning of the day when this act takes effect, must be punished according to the provisions of this act, and not otherwise.

§ 11. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

§ 12. This act shall take effect on the first day of January, one thousand eight hundred and eighty-nine, and shall apply to all convictions for crimes punishable by death, committed on or after that date.

STATE OF NEW YORK,  
Office of the Secretary of State, } ss.

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

FREDERICK COOK,  
Secretary of State.

This statute going into effect January 1, 1889, the writer felt it the duty of the body to consider, for the benefit of public officials, "what was the best method of carrying the same into effect," and recommended to the Society the appointment of a committee to consider this subject and report.

A preliminary report was made by this Committee at the November meeting, 1888, which was laid over for discussion to the December meeting, 1888.

That Committee there made a detailed report, which was, after discussion, unanimously adopted by the body.

The report is as follows

REPORT OF THE COMMITTEE OF THE MEDICO-  
LEGAL SOCIETY ON THE BEST METHOD OF  
EXECUTION OF CRIMINALS BY ELEC-  
TRICITY.

*Introductory.*—In the six weeks that have elapsed since the preparation of our original report to the Society we have made further valuable experiments, and although our report had not as yet been officially printed, we have received so many useful suggestions and criticisms upon such portions as had been given to the public in the press—both through correspondents and through discussions in various papers and journals—that we are enabled to present at this meeting a fuller and more explicit expression of our opinions. The additional light thrown upon a difficult problem has permitted us to make a few slight alterations in our earlier report, and to subjoin an appendix for the better elucidation of the subject.

*The Report.*—To the President and Members of the Medico-Legal Society: Your Committee appointed at the September meeting to consider and advise upon the proper method of executing criminals by electricity, reports as follows:

The law recently passed by the Legislature of the State of New York, providing for the administration of capital punishment by electricity, goes into effect January 1, 1889. All murderers sentenced to death for crimes committed on or after that date are to die by this means. As the use of electricity is an entirely novel method of putting to death human individuals, the manner of the application of the lethal current requires some thoughtful care and study.

The Commission appointed by the Governor to examine into various methods of causing death, which should be more humane than hanging, decided upon electricity. This Commission caused certain experiments to be carried out upon dogs, by which it was proven that electricity will produce certain and instantaneous death. In these experiments the animals were placed in a zinc-lined box half filled with water connected with one pole, while the other pole, in the shape of a wire, was wound around the nose or inserted into the mouth. There are no data as to the amount or kind of electricity employed. This method, although successful, is hardly applicable to a human being.

Some experiments were conducted by one of our Committee (Dr. J. Mount Bleyer), and reported in the *Humboldt Scientific Library*, March, 1887; and during the past summer a series of thirty or more careful experiments were made upon dogs with death currents at the Edison Laboratory, in New Jersey, by Messrs. Harold P. Brown and A. E. Kennelly, and the Chairman of this Committee (Dr. Frederick Peterson), all of which are of particular value to us in suggesting the proper method of executing criminals by electricity. These last were published in detail in the *Electrical World*, August 8, 1888, and from them we have ascertained the following points:

The resistance of these dogs was measured and found to vary from 3,600 to 200,000 ohms, depending upon the differing thicknesses of skin and hair, and the amount of moisture between the skin and the electrodes. The amount of electro-motive force was also accurately determined, and it was found that with the alternating current as low as 160 volts was sufficient to kill a dog, and that with the continuous current a much higher voltage was necessary for the production of a fatal effect.

There are several points requiring thoughtful consideration in the application of death currents to man which we will now proceed to lay before you.

The average resistance of the human body is

about 2,500 ohms. The most of this resistance is in the skin. It is evident, therefore, that the larger the surface of the electrode applied to the body the less will be the resistance. But it is also a fact that the density of the current depends upon the superficial area of the electrode. With a pole of small diameter the passing current will be more dense than when an electrode of large sectional area is applied.

We think that immersion of the body in a large quantity of water to act as one pole, or the placing of large metal plates upon any part of the body, should be put entirely out of consideration. It is further well known that if metal be directly in contact with the skin during the passage of an electric current burns and lacerations are apt to be produced.

We believe that all means hitherto suggested are open to criticism upon these grounds. The posture of the criminal requires also some discussion at our hands. We think there are serious objections to the employment of any apparatus in which the prisoner takes a standing position. There are so many histories of unseemly struggles and contortions on the part of criminals executed by the old methods that the necessity of some bodily restraint is evident. Furthermore, the possibility of a tetanic contraction of the body from the shock of the current is to be borne in mind. In our opinion, the recumbent or the sitting position is best adapted to our purpose.

Another question of importance is to which part of the body the two poles should be applied. There can be no doubt that one electrode should be in contact with the head. The other might be placed upon any portion of the body, upon the trunk or extremities, but there are obvious reasons why the neighborhood of the spinal cord would be more advantageous. The electric current, in passing through the body from one pole to another, undergoes more or less diffusion through the tissues. A current passing from the top of the head to the small of the back will be diffused throughout a great part of the brain, and all of the tissues of the neck. The medulla oblongata—a part of the brain which is the most vital—together with all the nerves of the neck and the spinal cord, which exercise jurisdiction over the lungs and heart, will be thoroughly permeated by the current applied in this way. As the seat of consciousness is in the brain, and particularly in the cortex of the cerebrum, it is clear that this faculty of the mind will suffer at once, if the current be sufficiently strong. The electric stream flows from the positive to the negative pole, and there might be some possible advantage in placing the positive pole on the vertex of the head, nearest the center of consciousness, although death in any case will be instantaneous.

After mature deliberation we recommend that

the death current be administered to the criminal in the following manner:

A stout table covered with rubber cloth and having holes along its borders for binding, or a strong chair should be procured. The prisoner, lying on his back, or sitting, should be firmly bound upon this table, or in the chair. One electrode should be so inserted into the table, or into the back of the chair, that it will impinge upon the spine between the shoulders. The head should be secured by means of a sort of helmet, fastened to the table or back of chair, and to this helmet the other pole should be so joined as to press firmly with its end upon the top of the head. We think a chair is preferable to a table. The rheophores can be led off to the dynamo through the floor or to another room, and the instrument for closing the circuit can be attached to the wall.

The electrodes should be made of metal, between 1 and 4 inches in diameter, covered with a thick layer of sponge or chamois skin.

The poles and the skin and hair at the points of contact should be thoroughly wet with a warm aqueous solution of common salt. The hair should be cut short. Provision should be made for preventing any moisture reaching from one electrode to the other.

A dynamo capable of generating an electromotive force of at least 3,000 volts should be employed, and a current used with a potential between 1,000 and 1,500 volts, according to the resistance of the criminal.

The alternating current should be made use of, with alternations not fewer than 300 per second. Such a current allowed to pass for from 15 to 30 seconds will insure death.

#### APPENDIX.

We append here the experiments in abbreviated tabular form upon which we have based our conclusions:

EXPERIMENTS WITH DEATH-CURRENTS BY MESSRS. BROWN AND KENNELLY AND DR. PETERSON AT THE EDISON LABORATORY AND AT COLUMBIA COLLEGE.

Dog No.	Pounds Weight.	Ohms Resist- ance.	Character of Current.	Voltage.	Duration of Contact.	Result.
1	10	7,500	Continuous	800	2 seconds	Death
2	20	8,500	Alternating	800	3 "	Death
3	13½	6,000	Continuous	1,000	Instantaneous	Death
4	46½	11,000	Alternating	800	2½ seconds	Death
5	50	6,000	Contin'ous	1,000, 1,100 1,200, 1,300 1,400, 1,420 and 1,200	6 instantaneous shocks, the last 2½ seconds	Unhurt
6	55	3,600	Alternating	570	3 seconds	Death
7	41½	14,000	"	250	5 "	Death
8	56	27,500	"	160	5 "	Death
9	59	5,000	"	260	5 "	Death
10	76	15,000	"	330	3 "	Death
11	67	14,000	"	272	5 "	Death
12	91	8,000	"	340	5 "	Death
13	53	30,000	"	220	30 "	Death

(Details in *Electrical World*, August 8, 1893.)

## EXPERIMENTS CONDUCTED BY MR. A. E. KENNELLY, AT THE EDISON LABORATORY.

Dog No.	Pounds Weight.	Ohms Resist- ance.	Character of Current.	Voltage.	Duration of Contact.	Result.
14	21½	...	Alternating	205	3 seconds	Death
15	19½	...	Alternating	176	15 "	Death
16	39½	...	Alternating	178	15 "	Death
17	57½	...	Continuous	400	40 "	Death
18	18½	...	Alternating	140	45 "	Death
19	20	8,000	Alternating	255	35 "	Death
20	16½	4,200	Alternating	418	2 "	Death
21	37½	200,000	Continuous	304	30 "	Un- hurt
22	12½	4,000	Alternating	100	65 "	Death
23	33	11,000	Alternating	500	30 "	Death
24	10	9,700	Alternating	536	1½ "	Death
25	10	9,700	Alternating	517	1 "	Death

(Details in *Electrical Review*, September 22, 1888.)

Objections having been made to the dogs on account of the small weight of the animals, the following larger animals were experimented upon by Mr. Harold P. Brown before your committee.

## EXPERIMENTS CONDUCTED BEFORE THE COMMITTEE OF THE MEDICO-LEGAL SOCIETY AT THE EDISON LABORATORY, DEC. 5, 1888, BY MR. HAROLD P. BROWN.

	Pounds Weight.	Ohms Resist- ance.	Character of Current.	Voltage.	Duration of Current.	Result.
Horse	1,230	11,000	Alternating	700	25 seconds	Death
Calf	124½	3,200	Alternating	770	8 "	Death
Calf	145	1,300	Alternating	750	5 "	Death

(Details will be reported in *Electrical World*.)

In most of the dogs the poles were bare copper wire around wet cotton waste wound about a fore and opposite hind leg. Poles the same in a horse, but applied to both fore legs. In the calves sponge-covered metal electrodes were applied, one to middle of forehead and one near the spine between the shoulders.

Death with the alternating current was without a struggle; with the continuous, painful and accompanied by howling and struggling.

In the earlier experiments where the alternations were from 660 to 4,100 per minute, the voltage was higher. In most of the experiments the alternations were made from 12,000 to 17,280 per minute, and the number of volts electro-motive force required was decreased.

It was suggested to us that the current should be applied through wristlet electrodes. Acting upon this idea we caused the poles to be applied to the forelegs of the horse, but were disappointed in the result. This method seemed not nearly as effective as our own suggestion of application to the head and back, as was illustrated in the speedy and easy death of the two calves.

Mr. Elbridge T. Gerry, Chairman of the Commission appointed by the Governor, whom we invited to accompany us and witness the last experiments, has suggested that clock-work be employed to make and break the circuit when criminals are executed in this manner, and we

think this a matter worthy of the attention of those who are to carry out the requirements of the law. His request that we specify more particularly the kind of apparatus needed, has led us to make inquiry in this direction. Relative to this matter, Mr. Harold P. Brown, who, by his numerous physiological experiments with death-currents and his high attainments in this department of science, is preëminently qualified to speak with authority upon this subject, recommends as follows:

"I think a portable steam-engine of three-horse-power with a dynamo electric generator of the alternating type, self exciting or with a small exciter, would be preferable. I approve fully the recommendations of your committee in regard to the electro motive force and other details. In my opinion \$5,000 would cover the cost of this apparatus."

If any doubt should exist in the minds of some that electricity would not necessarily be fatal to man because it has been successfully applied to lower animals, we have but to call attention to the fact, that since 1883 some 200 persons have been killed, as we are credibly informed, by the handling of electric lighting wires.

As most of these people were killed probably by contact of the hands with the wires, it shows that in man at least death is rapid in this manner. Hence the suggestions made to this Committee as to the use of wristlet electrodes have their value; and it is possible that this method, with the prisoner fastened in a chair, may ultimately prove the most desirable, as doing away with a complication of appliances and lending greater simplicity to the procedure.

Frederick Peterson, Chairman. R. Ogden Doremus, Frank H. Ingram, J. Mount Bleyer.

Hon. Elbridge T. Gerry, who was named as a member of this Committee, preferred on account of his relation to the Legislative Commission, not to act upon this Committee, and his name is, therefore, not attached to this report. Mr. Henry Guy Carleton, a member of the body, who has given the subject great attention, at the December meeting read a carefully prepared paper on the same subject which was considered at the same session at which the report of the Committee was approved.

The law by its terms goes into effect January 1, 1889, and should be given a fair trial before popular opinion should be excited against it, or any general re-opening of the discussion as to its wisdom. It will be the first attempt made to use the electric current as a means of producing death or as a human punishment.

The Committee of the Medico-Legal Society were authorized and requested to consult electricians, and their report as to the selection of the appropriate current to be used is based as well on

actual experiments as on the highest electrical authority.

Mr. Thomas A. Edison, than whom none can be regarded as a higher authority, has said upon this subject: "The best appliance in this connection is, to my mind, the one which will perform its work in the shortest space of time and inflict the least amount of suffering upon its victim.

"This, I believe, can be accomplished by the use of electricity, and the most suitable apparatus for the purpose is that class of dynamo machinery which employs intermittent currents. The most powerful of these are known as 'alternating' machines. The passage of the current from these machines through the human body, even by the slightest contact, produces instantaneous death."

The plan suggested by the Committee is one which leaves no room for intelligent doubt or criticism, that if followed by the Warden of the State Prison, or other officials, the law, in its spirit and intent, will be perfectly and successfully carried into effect.

## AN INTRODUCTION TO THE STUDY OF PNEUMONIC FEVER.

BY EDWARD F. WELLS, M.D.

THIRD PAPER—NATURE.

The nature of pneumonic fever has been a subject of warm dispute, and a variety of opinions have been held thereto. Clinically the disease is a many sided one, embracing: *a.* Such marked peculiarities in its general symptoms and morbid anatomy as to invite the belief that it is essentially a constitutional affection with a localization in the lungs. *b.* Constancy in the local changes, the magnitude and severity of which seem so often to govern the gravity of the general symptoms and results, as to lead to the opinion that it is in reality a local affection accompanied by the ordinary symptoms of a grave inflammation of a vital organ.

Three principal views have been held as to the essential nature of the disease: *a.* That it is simply an inflammation of the lungs with constitutional symptoms. *b.* That it is an essential fever in which the lungs bear the brunt of the disease—a veritable pneumonic fever. *c.* That it is neither a purely inflammatory affection nor a true systemic disease, but one occupying an isolated position between these.

These several opinions have had a numerical following within the profession, varying from time to time with the freaks of fashion and the ability, eloquence and persistency of the champions of their respective doctrines. Without going back very far we find that the popular belief has changed thrice in as many generations. A century ago the prevalent opinion, perhaps not

stated in very precise terms, nevertheless expressed and implied, and the conviction acted upon in practice, was that pneumonic fever was a general phlogistic disease with a local affection of the lungs, through which organs the system endeavored to eliminate the morbid material which was irritating the economy and was the real cause of the malady. Later it was generally believed that it was a local inflammatory process, the constitutional symptoms being a sympathetic irritation reflected from the affected organ throughout the general economy. This doctrine reached its greatest ascendancy during the tyrannical reign of the lancet in the first third of the present century. That the malady should be a systemic affection, with a local lesion, although still affirmed by the relics of a former generation and the prophets of a succeeding one, certainly never entered the mind of the rank and file of the medical profession. Now, however, this is the generally accepted and fashionable opinion—the pendulum of belief having swung from one extreme to the other and back again.

The ancients very generally considered it a local inflammation, although an attentive reading of their works will show that more than one author recognized the fact that the morbid action extends beyond the lungs.

Of the celebrated authors of the eighteenth century Cullen and Pringle recognized in this malady only a local inflammation, whilst Huxham, Hoffmann, Boerhaave, VanSwieten, DeHaen and Brown considered it an affection of the entire system.

Huxham<sup>1</sup> and Hoffmann<sup>2</sup> do not explicitly maintain that the disease is a general one, but from their descriptions and from their employing as its designation the term "*pneumonic fever*," we may infer with probability that they considered it something more than a common inflammation.<sup>3</sup> De Haen<sup>4</sup> thought that in this malady the blood became infected with a *materies morbi* which, in being extruded through the lungs, caused the local inflammation.<sup>5</sup> Boerhaave<sup>6</sup> regarded the morbid matter as being generated in the blood of obstructed arteries in the lung, from whence it passed into the bronchi and was expectorated, or, failing in this, it was absorbed by the circulating medium and discharged by the skin, kidneys or bowels as a critical evacuation.<sup>7</sup> The celebrated author of the Brunonian system<sup>8</sup> was quite clear in his estimate of the nature of this malady, saying that "the seat of the disease is the whole body," and giving as one of his reasons for this belief the fact that "the inflammation within the

<sup>1</sup> Essay on Fevers, London, 1739.

<sup>2</sup> Opera. Suppl., T. i, p. 165.

<sup>3</sup> See Sturges, Nat. Hist. Pneumonia, Lond., 1876, p. 2.

<sup>4</sup> Rat. Med., Leyden, 1761.

<sup>5</sup> See Cullen, Prac. Physic., Phila., 1792, vol. i, p. 184.

<sup>6</sup> Aphorismi de Cognas. et Cur. Morb.

<sup>7</sup> See Van Swieten's Comment. Aphor. Boerhaavii, Leyden, 1741.

<sup>8</sup> Brown, Elements of Medicine, Portsmouth, 1803, p. 299.

chest, for the most part follows the pyrexia at a considerable interval of time and never precedes it."

During the first three decades of the present century Paris was the medical center of the world and the views of Laennec, Andral and Chomel—the great triumvirate of the French school—are worthy of particular attention because they were probably those of the great mass of physicians of that day.

Laennec<sup>9</sup> considered pneumonic fever a pure local inflammation, saying that "the fever in peripneumonia is truly symptomatic, that is to say, is the effect of the inflammation. It rises and falls with the inflammatory orgasm."

Andral<sup>10</sup> is not so clear in his statements regarding the nature of the malady, although he is inclined to think it, in most cases, a local inflammation; although he admits that in others the local lesion seemed to be the result of a general disease. In one of his cases six days intervened between the onset of the fever and the earliest appearance of the physical signs. "All the organs seemed to be simultaneously the seat of a strong excitement, without there being any real inflammation. . . . No organ was really inflamed, but all seemed on the verge of it." He says that this case illustrates the fact that inflammations may be "preceded by a general inflammatory state, of which the supervening inflammation is but in some degree the localization."

Chomel,<sup>11</sup> in his great work, has been too intent upon presenting the facts regarding the disease to deal in opinions as to its nature, although he evidently considers it a local inflammation.

That there are cases which lend an air of plausibility to the theory of the local origin and nature of the disease is not to be denied and may be illustrated by a great array of cases.

A young woman, engaged in a laborious occupation, perspired freely and, feeling overheated, sat in a cold draught of air. She promptly took a "cold in the head" and during the night was feverish and restless. The inflammation, beginning in the naso-pharynx, crept rapidly down the air-passages until the base of the left lung was reached, which became hepatized.<sup>12</sup>

Coming down to near our own time we find a gradual development of a general professional belief that the disease is a general one with a local manifestation in the lungs, although a few still hold to the doctrine that it is strictly a local inflammation, and yet a few others prefer to occupy a middle ground between these.

Copland<sup>13</sup> defines pneumonic fever as an "inflammation and its consequences in the parenchyma of the lungs, often implicating the small bronchi and air-cells on the one hand, or the pleura on the other, or either, more particularly or exclusively."

Trousseau<sup>14</sup> considers it a local affection; "The

local phenomena generally open the scene" and "the general symptoms continue along with the local phenomena."

Davis<sup>15</sup> is perhaps the only author of wide reputation who yet holds pneumonic fever to be a local inflammation and who can perceive no evidence of a specific poison.<sup>16</sup>

Some authors<sup>17</sup> have considered pneumonic fever as occupying a solitary position midway between the local inflammations and the essential fevers.<sup>18</sup>

Eberle,<sup>19</sup> Merrell<sup>20</sup> and others think pneumonic fever a general disease of malarial origin.

Some authors have held that pneumonic fever is essentially a nervous affection.<sup>21</sup>

Fincham<sup>22</sup> believes the disease to be an essential fever, caused by the elimination through the lungs of noxious materials<sup>23</sup> that should be thrown off by the skin, but which is prevented by cold.

Draper<sup>24</sup> regards the pulmonary inflammation as a conservative process by which a *materies morbi* is destroyed or eliminated from the body.

Flint<sup>25</sup> says: "The pulmonary affection is doubtless inflammatory, but it is the local manifestation or the anatomical characteristic of a febrile disease, sustaining to the latter a relation analogous to that which the affection of the solitary and agminated glands sustain to typhoid fever. If this doctrine be true the proper place for this disease in the nosology is among the essential fevers."

Green<sup>26</sup> Pneumonic fever is "undoubtedly to be regarded as a general disease, of which the pulmonary inflammation is the prominent local lesion. The view that it is strictly a local affection of the lung to which the pyrexia and other symptoms are secondary is altogether untenable."

<sup>9</sup> Mediate Auscultation, N. Y., 1830, p. 223

<sup>10</sup> Med. Clin., Phila., 1843, Vol. 11, p. 115 et p. 132

<sup>11</sup> Pneumonie, Leipzig, 1841

<sup>12</sup> Wells, Cincinnati Lancet and Clinic, June 10, 1882, p. 499. Similar cases have been observed by others, see Semple, Lancet, N. Y., 1858, Vol. 1, p. 263

<sup>13</sup> Med. Dic. N. Y., 1855, Vol. 11, p. 878

<sup>14</sup> Clin. Med., Phila., 1873, Vol. 1, p. 661.

<sup>15</sup> Prac. Med., Chicago, 1884

<sup>16</sup> Similar views are held by Watson, Prac. Physic., Phila., 1845 p. 584, Elliottson, Prac. Med., Phila., 1844, p. 756, Drake, On Fevers, Phila., 1854, Sweet, Dis. Chest, N. Y., 1856, La Roche, Pneumonia, Phila., 1854, Walshe, Dis. Lungs, Phila., 1860, p. 296, Gerhardt, Dis. Chest, Phila., 1860, p. 203, Clark, Jour. Am. Med. Ass., Nov. 29, 1885, p. 615, Mott, Therap. Gaz., April, 1885, p. 234, Delafield, N. Y. Med. Rec., Nov. 28, 1885, p. 615, Lépine, Pneumonie, Wien, 1883, S. 105; Hölloperau Rev. des Sci. Méd., T. xii, Williams, N. Y. Med. Rec., May 1888, p. 506

<sup>17</sup> Fox, op. cit., Sturges, Pneumonia, p. 2

<sup>18</sup> Rosenstein, Berliner Klin. Wochenschr., 1884, Nr. 18, S. 253, and Andrew, London Lancet, 1884, Vol. 1, p. 753, think the proper place is not yet determined. "1889, p. 2, says that it is known disease"

<sup>19</sup> N. O. Med. and Surg. Jour., July, 1851

<sup>20</sup> Jackson, Lancet, 1887, Vol. 11, p. 1222, Heiss, Inaug. Diss., München, 1857, S. 17, Schuyler, N. Y. Med. Jour., Aug. 25, 1883, p. 205

<sup>21</sup> Lancet, N. Y., 1858, Vol. 1, p. 524

<sup>22</sup> Naumann, Ergebnisse u. Studien aus d. Med. Klin. zu Bonn, 1855 considers that the disease is preceded by an incubating stage in which the blood is surcharged with fibrin. Of this however, we have no proof and it is in direct conflict with some of the analyses made by Zimmermann. Quoted by Fox, Reynolds' System of Medicine, Phila., 1880, Vol. 11, p. 197, and the opinion of Virchow

<sup>23</sup> Bull. N. Y. Acad. Med., 1856

<sup>24</sup> Prin. and Prac. Med., Phila., 1881.

<sup>25</sup> Quinn's Dic. Med., N. Y., 1883, p. 676

Juergensen,<sup>27</sup> as is well known, considers the malady a general one with a local manifestation and allied in nature to typhoid fever. Moore<sup>28</sup> says that "the day is seemingly not far distant when we shall speak of pneumonic fever in precisely the same way as we use the term enteric fever at present; that is to signify a zymotic or specific blood-disease, manifesting itself after the lapse of a certain time—the period of incubation—by physical phenomena, objective and subjective, connected in this instance with the lungs."

A great number of authors<sup>29</sup> have held similar views, and this is the one which I maintain to be correct.

In my opinion pneumonic fever is a general disease with a local manifestation in the lungs, and I believe this conclusion warranted by all the facts in the case, including the following of especial prominence:  $\alpha$ . It prevails, to a greater extent than common, during certain seasons, in particular localities, amongst special classes of the population, and epidemically.  $\beta$ . It is infectious and, probably, under peculiar circumstances, contagious.<sup>30</sup>  $\gamma$ . It is not directly caused by traumatism or the ordinary causes of local diseases.  $\delta$ . The general symptoms always precede the local ones by an appreciable, and often a considerable interval.  $\epsilon$ . The disparity frequently observable between the constitutional symptoms and the extent and character of the local lesions. 2. The character and enormous amount of exudation material and its rapid removal, without destruction of tissue or loss of function. 7. The constant presence of peculiar microscopic parasites, which are, probably, the germs of the disease. 9. The unvarying course of the disease and its wonderfully uniform death-rate under varying and opposite modes of treatment.

The disproportion often existing between the

local lesions and the general symptoms must have been noticed by every observer of experience. Sometimes the local alterations are so slight as to almost or quite elude detection, and yet the constitutional symptoms may be of the most profound nature, or *vice versa*. A truly marvelous amount of local involvement may exist in the face of trivial symptoms, especially in the aged.<sup>31</sup>

In this connection, however, it should be borne in mind that there may be other changes in the lungs or other parts of the body, unknown as yet, of equal, or perhaps greater importance than those now familiar to us. "The essential features of a disease underlie, precede and stand in a dynamical relation to the anatomical lesions; determining, embracing, transcending and ruling them."

#### CHANGE OF TYPE.

It has been thought by some<sup>32</sup> that the type of this malady—pneumonic fever—in common with that of some other acute diseases, has changed since the end of the first third of the present century, and that evolution in this respect is yet in progress; that formerly pulmonary inflammations were sthenic, whilst now they are asthenic.

This belief probably had its origin in witnessing the remarkable and radical changes in the prevalent modes of treatment which transpired from 1830 to 1860.

This change-of-type theory gave rise to an immense amount of very warm discussion, being ably defended by many eminent partisans<sup>33</sup> and as powerfully attacked by an array of equally illustrious foes.<sup>34</sup> The discussion is now obsolete, from the fact that the advocates of the doctrine never pretended to base their belief upon anything more stable than the memory of man and a freak of therapeutic fashion. Those whose experience extended over many years contended that they remembered the pulse and general appearance of the patient as indicating greater activity of the disease in the early years of the century than forty or fifty years later, and cited the abandonment of blood-letting as proof of the proposition. On the contrary, the opponents of this theory denied the possibility of memory to compare incidents and appearances a third or a half century apart, and that the changes in treatment were more apparent than real—depressing medicines replacing the lancet. Although it may be impossible to compare

<sup>27</sup> Berliner Klin. Wochenschr., 1884, Nr. 17; also in Ziemssen's Handb. d. Spec. Path. u. Therap., Leipzig, 1877, Bd. V, S. 28 u. S. 143.  
<sup>28</sup> Trans. Int. Med. Cong., 1887; N. Y. Med. Rec., Sept. 10, 1887, p. 314.

<sup>29</sup> Markham, Lancet, N. Y., 1858, Vol. i, p. 20; Parkes, Med. Times and Gaz., February 25, 1860; Williams, Lancet, N. Y., 1862, Vol. ii, p. 3; Laveran, Traité des Mal. et Epidém. des Armées, Paris, 1875, p. 49; Hermann, Lungenentzündung, München, 1880, S. 5; Pulvermacher, Berliner Diss., 1882, S. 7; Gualdi, Jour. Am. Med. Assoc., July 5, 1884, p. 27; Sée, L'Union Méd., November 29, 1884; Robb, Jour. Am. Med. Assoc., November 28, 1885, p. 614; Loomis, Prac. Med., N. Y., 1884, also in Pepper's Syst. Med., Phila., 1885, Vol. iii, p. 307; Jane-way, Phila. Med. News, November 28, 1885, p. 605; Hart, Jour. Am. Med. Assoc., October 10, 1883, p. 395; Orton, Med. News, November 28, 1885, p. 605; Grifoulière, Gaz. Méd., 1833, p. 475; Geike, N. Y. Med. Rec., September 10, 1887, p. 294; Draper, Trans. N. Y. Acad. Med., 1865; Thompson, N. Y. Med. Rec., November 28, 1885, p. 614; Joly, Rev. Méd. de Toulouse, July 1880; Kinnicut, N. Y. Med. Rec., November 28, 1885, p. 615; Patten, Therap. Gaz., April 15, 1885, p. 234; Holt, N. Y. Med. Rec., February 21, 1885, p. 217; Col. Invest. Com. Rpt. in Brit. Med. Jour., December 1, 1883; Jacobi, N. Y. Med. Rec., November 28, 1885, p. 615; Scott, N. Y. Med. Rec., September 10, 1887, p. 294; Heidenhain, Virchow's Arch., Bd. lxx, Lester, N. Y. Med. Rec., September 10, 1887, p. 294; Putzel, N. Y. Med. Rec., May 30, 1885, p. 608; Sanders, Trans. N. Y. Acad. Med., 1881; Didima, N. Y. Med. Rec., September 10, 1887, p. 294; Heiss, Inaug. Diss., München, 1857; Maragliano, La Riforma Medica, October 30, 1888; Fritsch, Inaug. Diss., Erlangen, 1878, S. 5; Virchow, Berliner klin. Wochenschr., February 6, 1888, S. 113; Smith, N. Y. Med. Rec., April 7, 1888, p. 398; Waller, Inaug. Diss., Erlangen, 1877; Graham, Canadian Practitioner, 1887; N. Y. Med. Rec., July 28, 1888, p. 95; Heidenhain, Virchow's Arch., Bd. lxx; Vanderpoel, Trans. N. Y. State Med. Soc., 1865; Baginsky, Pneumonie u. Pleuritis, Würzb., 1880, S. 123.

<sup>30</sup> My experiments in this direction have produced, thus far, only negative results, yet I expect to yet demonstrate the proposition.

<sup>31</sup> Hourmann et Dechambre, Arch. Gen. de Méd., T. xii, 1836; Patton, Jour. Am. Med. Assoc., October 16, 1886; Loomis, Charcot's Dis. Old Age, N. Y., 1881.

<sup>32</sup> Grisolle, Tr. de Pneumonie, Paris, 1828; Watson, Prac. Phys., Edinburgh, 1855; Edinb. Med. and Surg. Jour., August, 1855; Advanced Life, London, 1864; Christison, Jour., July, 1858; Caton, Lancet, 1884, Vol. i, p. 241; Sturges, Nat. Hist. P., February 7, 1885, p. 161; Robinson, Pl.

<sup>33</sup> See references, ante.  
<sup>34</sup> Bennett, Edinb. Med. and Surg. Jour., 1852, and Lond. Lancet, N. Y., 1864, Vol. i, p. 177; Markham, Lancet, N. Y., 1855, Vol. i, pp. 22, 126 and 201; Balfour, Edinb. Med. and Surg. Jour., 1855; Skoda, Allgem. Wiener med. Zeitung, 1863; Flint, Prac. Med., Phila., 1865; Fox, Reynolds' Syst. Med., Phila., 1880, Vol. ii, p. 241; Sturges, Nat. Hist. Pneumonia, London, 1876; Lebert, Berliner klin. Wochenschr., August 28, 1871.



the impressions of former years with those of the present time, yet there can be no difficulty in comparing the features of faces as shown in a portrait; the descriptions of cases as carefully noted; the degrees of heat as measured by the thermometer; the rate and force of the pulse as measured by the watch and the mercurial column, etc., for here we have something tangible and absolute from which to draw our conclusions. Now it so happens that the champions of the change-of-type theory have affirmed that the pulse of man has become weaker than in times past, and in the absence of authentic records to the contrary it would be difficult or impossible to successfully contradict the assertion. But here, where they have located one of their corner-stones, the ground is sandy. In 1730 Hales<sup>35</sup> recorded the force of the pulse as he measured it with the mercurial tube, and the experiments of recent observers<sup>36</sup> have given almost identical results. Again, if we compare the published clinical histories of a series of typical cases of pneumonic fever of the past and present, we find the same symptoms and appearances recorded in almost identical words, being presumptive evidence that they were alike in their essential nature and type.

I am of the opinion, and this view has been shared by others, that the real secret of the entire controversy is the recognition of certain forms of the disease, only possible by means of auscultation and percussion, which were not formerly considered examples of this malady. This explanation becomes more plausible when we recollect that it was with the advent of these aids to diagnosis that the advocates of evolution began to perceive the change. Previously it was only the marked cases—those with ardent fever, cough, oppression, pain and characteristic expectoration which were recognized, whilst those with latent or anomalous symptoms were excluded, and these were the very cases in which phlebotomy was either useless or prejudicial. During this period, also, the eloquent advocacy of the depressant plan of treatment by Laennec and his followers, and the "restorative" and stimulating plans of management by Bennett, Todd and the English school obtained very large followings, and assisted powerfully in effecting the change in favor in which bleeding was held.

It has also been supposed that mankind in general has deteriorated in physique during recent years, and that herein lays the reason for the alleged change in type of the disease. There can be no doubt that differing occupations, modes of living, dress and customs of the people, epidemic influences and the geological, climatic and meteorological conditions present may modify the type of the malady; but that this has occurred amongst

a population whose surroundings have remained stationary is scarcely probable.

From these facts I am of the opinion that there has been no actual change in the type of this disease, and that the pneumonic fever of to-day is that of our fathers, and of past ages, and will be that of future generations.

#### NAME.

Objects and conditions require names for their convenient and certain identification, and no one will deny the desirability, and even the necessity, of a scientific designation for pneumonic fever which will clearly, yet tersely, indicate its seat and nature.

Writers upon this malady have treated of it under various and diverse appellations. Thus the Greek words *peripneumonia* and *pneumonia*<sup>37</sup> have been in common use since the days of Hippocrates,<sup>38</sup> who employed the former title. In this he was followed by a great number of authors<sup>39</sup> down to the present time. This term is also given as a synonym by the compilers of the "*Nomenclature of Diseases*,"<sup>40</sup> issued by the Royal College of Physicians of London. Sauvages,<sup>41</sup> desiring to be plainly understood, and wishing to distinguish the disease from some others with which it had been confounded, added the suffix *vera* to the name.

The *peripneumonia notha* of Sydenham,<sup>42</sup> Boerhaave<sup>43</sup> and others, the *peripneumonia catarrhalis* of Huxham<sup>44</sup> and the *pleuritis humida* of Stoll<sup>45</sup> were probably not true pneumonic fever.<sup>46</sup>

*Pneumonia* is the term in general use<sup>47</sup> and it is

<sup>37</sup> From *pneumon*, the lung

<sup>38</sup> De Morb., Lib. 11, et De Acut Affec., Lib. 11

<sup>39</sup> Aretæus, De Caus et Sig. Acut Morb., Lib. 11, Cap. 1, Theon

son quoted by Kinsman, Ohio Med Record, June, 1880, Celsus, De

Med., Lib. 14, Cap. vii, Cœlius Aurelianus, Acut Morb., Lib. 11, Cap.

xv Alexander of Tralles, Opera, Lib. V, Cap. 1, Aaron quoted by

Surianum in his edition of Rhazes, Lib. X, Cap. 1, A. Galli, De Peri-

pneumoniæ, etc., Bux., 1565, Wyer, Obsv. Rara, Basil, 1567, Pansa,

Peripneumoniæ, Annab., 1614, Tossius a Serra, Peripneumoniæ

Cur. Rat., Venet., 1618 Tennent, Epidemics of Virginia, Edinb.

1742, Wendt, Obsv. de Pleurit et Peripneum., Gottin., 1762, Belleni,

Peripneumoniæ, etc., Roma, 1775 Musgrave, Pleurisy and Peri-

pneumonia, London, 1779 Romani, Peripneumoniæ bilieuses, etc.,

Metz, 1779, Kreyssig, De Peripneumoniæ Nervosæ, Lipsæ, 1796, Guil-

bert, in Haller's Dis. ad Med., Lib. 11, Otto, Peripneum., etc., Lips.

1797 Fiorani, Saggio sopra la Peripneumonia, Pisa, 1788, Racine,

Rech. sur la Pleurisie et Peripneumonie, Paris, 1803, Brown, Ele-

ments of Medicine, Part 1, etc., etc., 1803, Brown, Ele-

ments of Medicine, Part 1, etc., etc., 1803, Brown, Ele-

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ments of Medicine, Part 1, etc., etc., 1803, Brown, Ele-

ments of Medicine, Part 1, etc., etc., 1803, Brown, Ele-

<sup>35</sup> Statistical Essays, London, 1733

<sup>36</sup> Martin and Valentin in 1844, Ludwig in 1847, Vierordt in 1855, Reite in 1884

<sup>37</sup> Flint N. A. Med. Chir. Rev., 1861, Le Beuf, Pneumonie, etc., Paris, 1870, W. Alcher, Thèse de Strassb., 1868, Legrand, L'Union Méd., 1860, Brun, Am. Jour. Obst. Vol. xi, p. 333, Biderl, Thèse de Paris, 1868, Waller, Inaug. Diss., Erlangen, 1877, Williams, Cycl. Prac. Med., Vol. iii, p. 406, Cullen, Prac. Phys., Phila., 1792, p. 177,

the one adopted by the compilers of the "Nomenclature of Diseases" above referred to. So long as the nature of the disease remained in doubt this was probably the best name that could have been adopted, inasmuch as it does not involve a pathological definition. *Acute* is prefixed to the principal term by some writers.<sup>48</sup> Lobar pneumonia is preferred by some,<sup>49</sup> while others employ *acute lobar pneumonia*,<sup>50</sup> primitive lobar pneumonia,<sup>51</sup> acute primitive diffuse pneumonia,<sup>52</sup> sthenic pneumonia,<sup>53</sup> etc.

Longrois, De la Pneumonie, Paris, 1782; Cappel, Pneumonie, etc., Gött., 1798; Bang, Acta Reg. Soc. Med. Vol. i, p. 258; Conradi, Pleuritis u. Pneumonie, Mart., 1803; Wright, Med. Facts and Obsv., Vol. iii; Mahary, Med. Com., Vol. xviii, p. 134; Low, Am. Med. and Phil. Reg., Vol. iv, p. 20; Elliottson, Prac. Med., Phil., 1844, p. 751; Hudson, Dub. Jour. Med. Sci., Vol. vii; Seymour, Lancet, Dec., 1837, p. 432; Schmidtman, Obsv. Med., T. i, p. 17; Hourmann et Dechambre, Arch. Gen. de Méd. T. xii, 1836; Ziemssen, Präger Vierteljahrsschr., 1858; Gerhard, Dis. Chest, Phila., 1860; Rilliet et Barthez, Mal. des Enf., Paris, 1837; LaRoche, Pneumonia, Phila., 1854; Swett, Dis. Chest, N. Y., 1856; Grissolle, Traité de la Pneumonie, Paris, 1841; Tanner, Dis. Infancy, etc., Phila., 1871; Stewardson, Elliottson's Prac., Phila., 1844; Watson, Prac. Phys., Phila., 1845; Drake, On Fevers, Phila., 1854; Ziemssen, Pneumonie u. Pleuritis, Berlin, 1862; Bleuler, Inaug. Diss., Zürich, 1865; Riesell-Huppert, Inaug. Diss., Leipzig, 1869; Heinze, Arch. d. Heilk., 1868, S. 49; Immermann und Haller, Arch. f. Klin. Med., Bd. v, S. 1; Bauer, Arch. f. Klin. Med., 1874, S. 490; Todd, Med. Times and Gaz., May 15, 1852, p. 483; Leichtenstern, Samml. Klin. Vorträge, No. 82; Tophoff, Berliner Diss., 1870; Fisser, Arch. f. Klin. Med., 1873, S. 391; Peacock, St. Thomas' Hosp. Rpts., 1875; Joffroy, Broncho-Pneumonie, etc., Paris, 1880; Chomel, Pneumonie, etc., Leipzig, 1841; Damaschning, Thèse de Paris, 1867; Traube, Allg. Med. Centralzeitung, 1855; Squire, Practitioner, 1878; Fabre, Gaz. des Hôp., 1878, p. 1171; Gazin, Thèse de Paris, 1874; Künze, Zeitsch. f. Prakt. Med., 1874, No. 17; Gaucher, Prog. Med., 1878, p. 426; Lapierre, La France Méd., 1er Mai, 1878; Gerhardt, Thürig. Corresp. Bl., 1875; Garbagni, Inaug. Diss., Würzb., 1875; Teissier, Jour. Med. de Lyon, 1848; Delhoux, Bull. de Thérap., 1863; Dreschfeld, Lancet, 1876, Vol. i; Veraguth, Virchow's Arch., Bd. lxxxii; Schwarz, Inaug. Diss., Erlangen, 1889; Torio, Thèse de Paris, 1876; Grimshaw and Moore, Dub. Jour. Med. Sci., Aug., 1875; Putegenat, Jour. de Méd. de Brux., 1866; Fossagrives, L'Union Méd., 1857; Dittmar, Gaz. Méd. de Strab., 1865; Wunderlich, Arch. der Heilk., 1862; Robert, L'Union Méd., 1864 et 1878; Landrieux, Gaz. des Hôp., 1875; Reigler, Wiener Med. Wochenschr., 1858; Monti, Gaz. Med. Ital. Lombarda, 1863; Thomas, Memorabilien, 1874, No. 9; Leube, Berliner klin. Wochenschr., 1877, S. 299; Monthus, Thèse de Paris, 1863; Gres, Gaz. Hebdom., 1856; Bruzelius, quoted by Lépine, Die Acute Lobäre Pneumonie, Wien, 1883; Lecointe, Gaz. Hebdom., 1856; Roche, Gaz. Méd. de Strab., 1858; Armaingaud, Pneumonie, etc., Bordeaux, 1872; Corrigan, Dublin Hosp. Gaz., 1857; Bonnemaison, L'Union Méd., 1875, Nos. 77-106; Hall, Boston Med. and Surg. Jour., May, 1876; Arnold, Phila. Med. and Surg. Rep., Jan., 1867; Morenre, Gaz. des Hôp., 1854; Fischel, Präger Med. Wochenschr., 1877; Lagout, L'Union Méd., 29 Oct., 1878; Charcot, Thèse d'Aggrég., Paris, 1860; Leyden, Berliner klin. Wochenschr., 1879; Lewissou, Jahrb. f. Kinderk., 1873; Viry, L'Union Méd., 1879, T. i, p. 315; Vogt, Norsk. Mag. f. Läger., 1877; Barth et Poulin, Gaz. Hebdom., Surugue, Thèse de Paris, 1875; Villard, Recueil. de mém. Mil., 1876; Lépine, Thèse de Paris, 1870; Delhoux, Gaz. Méd., 1857, No. 39; Mecario, L'Union Méd., 1859; Seidel, Deutsche Klin., 1862; Drasche, Canstatt's Jahrb., Bd. iii, S. 205; Moore, Brit. Med. Jour., 1868, Vol. i, p. 10; Emery, Soc. Anat., 1875; Duval, Gaz. des Hôp., 1856; Küssner, Berl. Klin. Wochenschr., 1875, No. 34; Landrieux, Gaz. des Hôp., 1869; Codet, Gaz. Méd., 1878, No. 34; Skoda, Allg. Wiener Med. Zeit., 1863; Cohn, Zeitsch. f. Klin. Med., Bd. vi; Chausseaux, Thèse de Paris, 1877; Franque, Inaug. Diss., Würzb., 1855; Ricau, Thèse de Paris, 1874; Bamberger, Wiener Med. Wochenschr., 1857; Borland, Boston City Hosp. Rpts., 1870; Poncet, Thèse de Paris, 1859; Voss, Nor. Mag. f. Läger, Vol. vii, p. 829; Hermann, Allg. Med. Zeit., Nos. 46-52, 1873; Delafield, N. Y. Med. Rec., Aug., 1875; Göttingen, Schmidt's Jahrb., 1882; Forget, Bull. de Thérap., 1855 et 1856; Mitchell, Gaz. Méd., 1859, p. 128; Lawson, Am. Jour. Med. Sci., 1860; Morin, Thèse de Strab.; Waters, Brit. Med. Jour., 1869, Vol. ii, p. 568; Kapp, Behandl. d. Pneumonie, Bonn, 1872; Funck, Inaug. Diss., Griefswald, 1868; Zuckermann, Behandl. d. Pneumonie, Berlin, 1872; Butry, Epidem. Pneumonie, Leipzig, 1880; Zimmermann, Path. u. Phys. d. Pneumonie, Prag, 1852; Epting, Inaug. Diss., Tib., 1847; Wilberg, Nephritis bei Pneumonie, Berlin, 1885; Thieme, Intermit. Pneumonie, Jena, 1865; Schmitt, Inaug. Diss., Würzburg, 1884; Schiel, Statist. d. Pneumonie, Kiel, 1883; Rietz, Inaug. Diss., Jena, 1868; Mosler, Bilföse Pneumonie, Lips., 1872; Leubuscher, Inaug. Diss., Berlin, 1855; Kruger-Hansen, Verfahren bei Pneumonie, Rostock, 1841; Draheim, Inaug. Diss., Berlin, 1867; Koettwitz, Pneumonie, Halle, 1882; Coleman, Inaug. Diss., Würzb., 1886; Dörrenberg, Inaug. Diss., Berlin, 1880.

<sup>48</sup> Raven, Acute Pneumonia, London, 1883; Wittich, Die Acute Pneumonie, Erlangen, 1850; Copeland, Med. Dic., N. Y., 1855, Vol. ii, p. 878; Sturges, Nat. Hist. Pneumonia, London, 1876; Fox, Reynolds's Syst. Med., Phila., 1880, Vol. ii, p. 153; Green, Quain's Dic. Med., N. Y., 1883, p. 874; Loomis, Pepper's Syst. Med., Phila., 1885,

The term *croupous pneumonia* was introduced by Rokitsansky<sup>54</sup> and derives its significance from a fancied resemblance of the intra-alveolar exudate to that of laryngeal croup. The name has been widely adopted in Germany and elsewhere. Various modifying words are added so as to render the term *acute croupous pneumonia*,<sup>55</sup> *croupous lobar pneumonia*,<sup>57</sup> etc.

*Pneumonitis*, a name implying the inflammatory nature of the disease is the term used by many.<sup>54</sup> Pringle<sup>59</sup> treats of the malady under the caption of "*pleurisy and inflammation of the lungs*," and many German writers employ simply the term *Lungenentzündung*<sup>68</sup> with or without the prefix *lobäre*.

Good<sup>61</sup> uses the name "*empresma pneumonitis*." Trousseau<sup>69</sup> requires several words to express his meaning, as "*pneumonia, peripneumonia vera, simple legitimate pneumonia*." Schliessinger<sup>63</sup> employs "*genuine fibrinous pneumonia*." The terse "*pneumonia*" of Walshe<sup>64</sup> in 1844 has become his "*acute asthenic exudative pneumonia*" of 1871. Valsalva and Morgagni,<sup>65</sup> impressed with the importance of the accompanying pleuritis, employed the term *pleuro-pneumonia* and their example has been followed by others.<sup>66</sup> *Pulmonia* was the term used by Amar.<sup>67</sup>

Vol. iii, p. 307; Walshe, Dis. Lungs, Phila., 1859; Wendt, N. Y. Med. Rec., Oct. 18, 1884, p. 430.

<sup>49</sup> Holt, N. Y. Med. Rec., Feb. 14, 1885, p. 174; Doubleday, N. Y. Med. Rec., Mar. 28, 1885, p. 343; Kinnicut, N. Y. Med. Rec., Oct. 11, 1884, p. 399; Satterthwaite, Phila. Med. News, Jan. 5, 1889, p. 1.

<sup>50</sup> Schuyler, N. Y. Med. Jour., Aug. 25, 1883, p. 205; Lépine, Die Acute lobäre Pneumonie, Wien, 1883; Delafield, N. Y. Med. Rec., April 12, 1884, p. 398.

<sup>51</sup> Barthez, See Cincinnati Lancet and Obsv., 1864, p. 668.

<sup>52</sup> Lebert, Berliner klin. Wochenschr. Aug. 28, 1871.

<sup>53</sup> Fuller, Diseases of the Lungs, Phila., 1867.

<sup>54</sup> Path. Anat., Phila., 1855, Vol. iv; See Fox, Reynolds' Syst. Med., Phila., 1880, Vol. ii, p. 153.

<sup>55</sup> Rindfleisch, Path. Histol., Phila., 1872; Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Leipzig, 1877, Bd. v; Bayer, Arch. f. Heilk., Bd. viii, 1867, S. 546; Kocher, Croupösen Pneumonie, Würzb., 1866; Thomas, Arch. f. Heilk., Bd. v, S. 30; Schube, Arch. f. Heilk., Bd. xvi, S. 185; Geuder, Croupös, Pneumonie, Nürnberg, 1886; Waller, Croupösen Pneumonie, Berlin, 1881; Mays, Therap. Gaz., April 15, 1885, p. 217; Maurer, Arch. f. Klin. Med., Bd. xiv; Schneider, Inaug. Diss., Erlangen, 1876; Fritsch, Inaug. Diss., Erlangen, 1878; Solberg, Inaug. Diss., München, 1883; Bachfeld, Inaug. Diss., Stuttgart, 1885; Brey-Ksser, Inaug. Diss., Griefswald, 1869; Speck, Inaug. Diss., Marb., 1870; Schapira, Inaug. Diss., Würzb., 1877; Sidlo, Behandl. d. Croup. Pneum., Leipzig, 1875; Scheffer, Inaug. Diss., Halle, 1885; Buttermann, Inaug. Diss., Griefswald, 1882; Sampter, Inaug. Diss., Breslau, 1881; Maurer, Inaug. Diss., Leipzig, 1884; Ebhardt, Inaug. Diss., Kiel, 1885.

<sup>56</sup> Fisser, Deutsche Arch. f. Klin. Med., 1873.

<sup>57</sup> Wintrich, Croupösen lobäre Pneumonie, Erlangen, 1843.

<sup>58</sup> Swediaur, quoted by Copeland, Med. Dic., N. Y., 1855, Vol. ii, p. 878; Hildebrandt, Path. Gen., Erlangen, 1795; Giovanni, Gaz. Med. Ital. Lombarda, 1872; Flint, Prac. Med., Phila., 1868, p. 163.

<sup>59</sup> Diseases of the Army, London, 1768, p. 139.

<sup>60</sup> Buhl, Lungenentzündung, etc., München, 1872; Huss, Lungenentzündung, u. s. w., Leipzig, 1861; Skoda, Allg. Wiener Med. Zeitung, 1863; Pause, Lungenentzündung, Leipzig, 1861; Fritsch, Berlin, 1873; J. Lungenentzündung, Canstatt's Jahr.

<sup>61</sup> Dinstl, Canstatt's Jahr. Lungenentzündung, Wien, 1849; Folkmann, Lungenentzündung, Erlangen, 1847; Rödere, Cestr. Med. Wochenschr., 1843; Hannover, Deutsche Klinik, 1863; Seitz, Behandlung d. Lungenentzündung, Marb., 1862; Scharf, Inaug. Diss., Berlin, 1837; Richter, Path. u. Therap., Berlin, 1833; Herr, Epidem. Lungenentzündung, Wetze, O. J.; Baumgartner, Behandl. d. Lungenentzündung, Stuttg., 1850.

<sup>62</sup> Study of Medicine, London.

<sup>63</sup> Clin. Med. Phila., 1873, Vol. i, p. 660.

<sup>64</sup> Inaug. Diss., Berlin, 1873.

<sup>65</sup> Dis. Lungs, First edition, London, 1844. Last ed., 1871.

<sup>66</sup> De Sed. et Caus. Morb. Hom.

<sup>67</sup> Bouillet, Pleuromonique Epidem., Besançon, 1759; Andral, Clin. Med., Phila., 1843, Vol. ii, p. 115; Möring, Hist. Cholera, etc., Leipzig, 1830; Laveran, Gaz. Hebdom., 1865, p. 545; Vasquez, Thèse de Paris, 1878; Baronius, Thèse de Paris, 1878; Forolivi, 1838; Brunner, Pleuro-pneumon. Epid., Heidelb., etc., Madrid, 1777.

Huxham<sup>68</sup> and Hoffmann<sup>69</sup> were probably in advance of their time when they employed the term *febris pneumoniae*, which although in common use by the laity in the popular designation, "*lung fever*," has had only a limited currency in the ranks of the medical profession.<sup>70</sup> *Pleuro-pneumonic fever* would be more accurately descriptive,<sup>71</sup> but the name is open to the objection of great length and hybridity.<sup>72</sup>

Believing, as I do, that the disease under consideration is an essential fever—a general malady—in which the principal and most constant morbid anatomical changes are located in the lungs,<sup>73</sup> I have adopted for its designation the term *pneumonic fever*.<sup>74</sup>

### LAPAROTOMY.

FOR THE RELIEF OF RECURRING ATTACKS OF INTESTINAL OBSTRUCTION DUE TO PERITONEAL BANDS AND ADHESIONS. RECOVERY WITH COMPLETE DISAPPEARANCE OF SYMPTOMS.

BY JOHN G. PERRY, M.D.,  
OF NEW YORK CITY.

The following history is taken from the patient's written account:

"On January 1, 1886, after much mental anxiety and responsibility, I succumbed to an attack of nervous prostration, the primary evidences of which were paroxysms of gasping and rapid respiration as if from hard running. April 7, of the same year, left home for New York, and soon after reaching there was seized with acute pain in the bowels followed by purging. Similar attacks recurred through the following summer at intervals of about ten days or two weeks, while loss of nerve power was fast becoming more marked. Returned to my home April 12, and immediately afterwards was ill with dysentery. After a month recovered sufficiently to move about the house, but before recovery was complete broke down again with peritonitis, and from this attack was confined to my bed three months, having two relapses; but through all the following months up to February, 1888, had attacks at intervals of three or four weeks of severe intestinal pain attended with nausea vomiting and collapse."

On February 24, 1888, the patient came to

New York from her home in the West, and placed herself under my care; and as soon after as possible, I made an examination with the following results: Low down in the abdomen, on the right side, and just above Poupart's ligament, as if arising from it was a mass about the size of a hen's egg, firm, unyielding and exquisitely sensitive to the touch.

The uterus was in place, the Fallopian tube free and without apparent disease, and the ovary—well (?) I could not distinguish it. The history certainly did not indicate ovarian involvement. There was some dysmenorrhœa at each menstrual epoch, but it was not ovarian in character, while menstruation continued six and even seven days. The mass seemed beyond the place occupied by the ovary and by conjoined pressure was less sensitive than when pressed from the outside only. It was firmer, and more securely fixed than an ovary would be, and furthermore, the paroxysms of pain did not usually arise from the point of tumefaction, but higher in the abdomen and about two inches from the right of the umbilicus, from whence it would almost immediately depart and fix itself at the epigastrium, to be followed by vomiting and cramps of the stomach.

Later on I inflated the bowel with oxygen gas, with the effect of dilating the ascending colon just above the cæcum, where it seemed to be weak and yielding without effecting its passage into the ileum, even with the aid of manipulation within and without. Following this I sent 2 grains of calomel into the system as a detective, with the result of securing two moderate passages mixed with mucus, after which I again essayed inflation with oxygen with the satisfaction of feeling some of it pass beyond the obstruction.

Being now satisfied that I had only partial and not complete obstruction of the bowel with fecal matter, and no evidence of abscess or serious inflammation, I began treatment for the removal of the mass and as follows: Each day the patient was to receive a hot abdominal pack for the purpose of relieving tenderness, inhibitory spasm and pain, and to stimulate intestinal digestion. Every fourth night 2 grains of calomel were to be given, and for diet hot milk alternated with Rudisch beef peptones, while as soon as the tenderness had subsided sufficiently she was to receive massage over the lower abdomen.

On the twelfth day when all seemed to be doing well, the patient gaining strength and the mass subsiding, she was suddenly seized with acute pain of the epigastrium, accompanied with nausea, and extreme hyperæsthesia over the whole surface of the abdomen. A promise was given that if the pain was not conquered within half an hour a hypodermic of morphia should be given, so the hot pack was applied and ordered to be continued until the pain subsided. Relief came soon, so that from this time on the habit of

<sup>68</sup> Fevers, London, 1739.

<sup>69</sup> Opera Physio-Med., Geneva, 1740.

<sup>70</sup> Massonici, Thèse de Paris, 1876; Cohnheim, Lec. de Chir. Méd., 1877, p. 171; Bernheim, Rev. Méd. de l'Est, 1877; Moore, N. Y. Med. Rec., Sept. 10, 1887, p. 314.

<sup>71</sup> Guirac, Bordeaux Méd., 1873, No. 48, employs the term lobar pneumonic fever.

<sup>72</sup> Schuyler, N. Y. Med Jour., Sept. 8, 1883, p. 257, in mistakenly objecting to the name "*pneumonic fever*," says: "What purpose is served by giving this fever the prominence which attaches to the term '*essential*,' and according it a special name? By the designation of '*febris pneumoniae*' of the malady elucidated, it is not more clear, for treatment more clear, does not such prominence act injuriously by withdrawing attention from indications of vastly more importance than those which arise in connection with the pyrexia?"

<sup>73</sup> See ante.

<sup>74</sup> Lat., *febris pneumoniae*. Fr., *fièvre pneumonique*. Ger., *pneumonisches fieber*.

morphia was broken, and no further demand for it was ever made.

Similar attacks occurring twice afterwards, and within a few days of one another, and recalling the fact that when the pain began below it quickly transferred itself to the region of the stomach, I began to suspect dilatation of this organ, and at once introduced the flexible stomach tube with the result of washing away a large amount of undigested food, mucus and gas, and giving immediate relief to the patient.

This lavage of the stomach was now ordered for each morning before the introduction of food, with massage in the evening before the pack, and 2 grains of calomel every fifth night.

No paroxysm of pain occurred again. One or more movements were secured from the bowels daily. The patient's strength also improved daily, but it was April 15, before the whole of the faecal mass was dislodged. The patient was now ordered to resume her usual diet, and to begin daily exercise out-of-doors.

All went well for a while, but after the walks had become extended to many blocks the patient began again to complain of discomfort and constipation, which increasing daily, forced me at length to make an exploratory examination, under which I found another mass of faecal matter accumulated at the same point as before, and filling up three or four inches above Poupart's ligament.

That adhesions existed constricting the gut at this point there could be no doubt; certainly a second accumulation coming so soon after the first would not be fortuitous as I thought the first might be. All the possibilities and advantages of an operation now took possession of me; yet I hesitated, deeming it possible that if adhesions did exist and could be discovered, they might be overcome by distention and manipulation; so the patient was put to bed, and all the processes formerly established set in motion again.

The disintegration was slow and tedious, but the 10th of May it was wholly dispelled, and by the following method: I attempted either to loosen the adhesions or to stretch them sufficiently to free the bowels from their embrace, though as yet I had failed to portray any to sense of touch. Passing the index finger of the left hand along the right side of the vagina, and raising the uterus at its junction with the broad ligament as high as possible, I forced the fingers of my right hand deep into the groin from the outside, until by drawing them upward and backward I could strain every tissue that lay within the grasp of my fingers, varying the force and direction as my fancy or imagination dictated. After the manipulations the hot pack was applied to overcome the bruising and sensibility they created.

One fact was made prominent: that while this

process continued no accumulation occurred, nor were laxatives rendered necessary, while later on the patient was able to resume her walks. Summer and hot weather now coming on, the patient was ordered to the seashore, where under the guidance of a physician, surf-bathing and a rigid dietary, she could demonstrate what had been accomplished.

Timidity and apprehension restrained her from venturing upon either solid food or exercise until well on in July, when, finding encouragement, she undertook a long walk. At once the pain returned, with nausea, headache and slight fever; and these not yielding to rest, the doctor was summoned. He fearing the presence of peritonitis, ordered morphia and hot applications. Being unwilling to resort to this method of treatment again, she returned to the hot packs, low diet, laxatives, and absolute rest, with the result of soon finding comfort and relief from pain with, later, ability to move about her room and on to the piazza where, through the rest of the summer she found her pleasure, with much gain in strength and weight.

Soon after my return in October, she came back to the city, and on being told that an accumulation from obstruction again existed, and that it would be only a waste of time to continue longer with palliative measures, she at once consented to an operation.

At this juncture I asked Professor F. S. Dennis, whose skill as an operator and experience in abdominal surgery, entitled him in the highest degree to judge, if he could approve my diagnosis and contemplated operation. He took no exception to either, but heartily endorsed the latter. For this and his valuable assistance at the operation I now wish to offer my recognition and thanks. To Drs. Meyers, of this city and F. F. Smith, of St. Augustine, Fla., I am also indebted for valuable services rendered at the operation.

After the necessary precautions had been taken to render the operation aseptic, it was commenced on the morning of November 1, by an abdominal incision (lateral) being made to run from about an inch above and two inches from the crest of the ilium (towards the median line) down towards and within an inch of Poupart's ligament, through the parietal muscles and to the peritoneum. A small amount of faecal matter was left as a guide at the point of obstruction, and the incision passed directly over its centre. Seizing now the peritoneum with a pair of forceps, and raising it from the intestines, I divided it the whole length of the wound. At once there was a gurgling sound, and the imprisoned mass of faecal matter moved on quickly and disappeared. The bridge or principal adhesion had evidently been severed along with the peritoneum, but yet on the outer surface of the cæcum, which was now plainly in

view, no evidences of inflammation recent or remote presented themselves.

Passing now the index finger between the folds of the intestines and behind the cæcum, I found a strong band, which, as it passed behind and towards the base of the cæcum, divided, one portion running inwards to be lost in the pelvis, the other outward and downward, losing itself in the pelvic fascia beneath the pubis. One extremity being cut between two catgut ligatures, and the other torn carefully from its adhesion, nothing now remained to prevent the whole of the cæcum from being passed in review along the palmer surface of the index finger.

Moved with great curiosity, I now thought of searching for the appendix, which, as yet, had not engaged our attention; but finding the cellular connections between the coils of the intestines undisturbed and without evidence of inflammation having disturbed its functions, I sponged and closed the wound, bringing the peritoneum together first with a running stitch of catgut, and then the parietes with silver wire running beneath the peritoneum, passed first according to the method of Dr. Jas. B. Hunter.

The usual outward dressings and bandages were now applied, as after laparotomy, and the patient put to bed. No evil symptoms occurred from this time on, while the highest point reached by the thermometer was  $99\frac{3}{4}^{\circ}$ .

There being no pain, sulfonal was sufficient to keep the patient quiet and secure sleep at night. One month was allowed as a test of the cure, and no obstruction occurring within this time, the patient was discharged, her appetite being good and bowels acting daily.

February, 1889. The patient has since been heard from, and is doing well.

## MEDICAL PROGRESS.

A CASE OF DENTAL FISTULA OPENING ON THE MAMMARY GLAND.—The following case, reported by DR. NICOLAI, of Stuttgart, Germany, in the *Deutsche Monatsschrift für Zahnheilkunde* for December, 1888, illustrates forcibly the importance attaching to the necessity of placing the mouth at all hazards in a perfectly physiological condition.

Dr. Nicolai says: A lady, 32 years of age, who has not had her teeth examined for four years, presented herself to me to have her teeth placed in good condition. This necessitated cleaning the teeth, the removal of salivary calculus, and the introduction of eleven gold, six amalgam and two cement fillings.

On the completion of these operations, the mouth was in a normal healthy condition, with the exception of the lower left first molar, of which nothing

but the roots were left; these were broken, and underneath the margin of the gum. They were filled with the ichorous products of decomposition, and their margins were overhung with the inflamed, tumefied gum. This condition of affairs has prevented the lady from masticating her food on this side for some time, and as a natural result the right side alone was used. After having performed all the necessary operations in her mouth, I endeavored, by naming all the disadvantages arising from the presence of the roots, to convince her of the necessity of removing them. I told her that the left side of her mouth was completely useless, that these roots have caused diseases of the two adjoining teeth of the same jaw, and of the articulating tooth of the upper jaw; that a tendency to the recurrence of caries still existed, that inflammation of the gums would always exist and that the breath will be always tainted. All these efforts were futile and were met with the single statement that, while the roots were not painful, she would not submit to their removal. To diminish the jeopardy of my work to the minimum, I concluded to place the roots in as good a condition as I could and, if possible, make them serviceable for mastication on that side of her mouth. Removing the tumefied, spongy gums, and all products of decomposition, and by means of the bur the ichorous contents of the roots, I adopted the most radical means of disinfection known to science, capped the roots with red gutta-percha, and dismissed the patient, satisfied in my belief of having aided her to the best of my ability.

The following day the patient's husband came to my office, hastily requesting a few moments' interview. "What have you put in the lower tooth of my wife? Was it iodoform, carbolic acid, creosote, or some such substance having a marked odor?" On being answered in the affirmative, he merely thanked me, stating that the family physician would call on me. In astonishment I awaited the latter's call, who stated to me that the lady has had a slight discharge of pus for the last eight months, at a location about 1 cm. above the left nipple of the breast. There was no apparent disease of the breast. At first cold poultices were applied, these were succeeded by warm ones; later, a probe was introduced following the channel upward, and this was followed by the injection of astringent remedies, and finally by cauterization of the wound. The discharge, however, continues. To-day, the patient claims that she discovers the odor of the medicines used in her tooth yesterday, in the discharge from the breast. He wished to know whether it was possible that the lady is in error, or whether it is possible that there is some connection between the breast wound and the roots.

I have had a case of pus inundation where the discharge took place in the neighborhood of the shoulder. Many cases have been reported in our

literature, among others by Carabelli, but no case of infiltration to the mammary gland. The connection, if any exists, can be ascertained with certainty. If it is true that the medicaments used have passed from the roots into the wound on the breast, a harmless coloring would also do so. A cochineal solution was injected into the root-canals, and the following day the discharge from the breast was colored, thus positively establishing the connection. I concluded to extract the roots and thus, by removing the primary cause, cure the ailment. The examination made after the extraction of the roots proved that the pus had passed through the basilar portion of the lower maxilla, followed the border of the sternocleido-mastoid muscle, perforating the strong fascia of the platysma myoides, it followed the pectoral muscle and infiltrated the tissues of the mammary gland, discharging into the external world according to the laws of gravitation. Phenol water and boracic acid were afterward used. In about twelve days the wound on the breast was healed.—*The Dental Review*, February, 1889.

**ANTIPIRYN IN THE FIRST STAGES OF LABOR.**—We have already alluded to the fact that antipyrin is claimed during the first stages of labor to render the pains less severe, while at the same time not interfering with the progress of labor. Although these claims have not been universally admitted, and we have referred to papers in which the claim is made that it is entirely negative in its action in this respect, some results published by J. O. VAN WINKLE in the *New York Medical Journal*, for January 5, 1889, go far to substantiate them. He refers to several cases in which antipyrin was employed. The first dose was given when the os was about one third dilated, except in cases where the pains were very severe from the outset, when it was ordered earlier. Antipyrin, gr. xv, and spt. ammonia, xxx drops, were administered every two hours during the first stage for three doses. The temperature and pulse were noted at the time the first dose was administered, and every hour thereafter until dilatation was complete. In almost every instance the patient said she felt greatly relieved, and this was evident from her behavior. In some cases the patient would fall asleep for an hour or so after the first or second dose. Incidentally it was noticed that the temperature fell from half a degree to a degree and a half Fahrenheit. The pulse became somewhat more frequent and the respiration slightly increased. Occasionally, if the pulse was rather rapid before administering the drug, it decreased in frequency. From statistics as to the duration of labor in cases where it was not employed, and where it was employed, it would seem that antipyrin does not increase the duration of labor, but on the contrary, tends to lessen the first stage on an average

of about half an hour, while the second stage remains practically the same, and in no case was there any injury done the mother or child. The author claims that antipyrin very materially lessens the severity of the pains during the first stage of labor, and has never given rise to any alarming symptoms, this immunity doubtless being due to the fact that in its administration it was always combined with a stimulant.—*Therapeutic Gazette*, Feb. 15, 1889.

**SOME OF THE ABUSES OF ETHERIZATION.**—At the conclusion of a paper on this subject DR. GEORGE F. SHRADY says:

In order to avoid many of the abuses of anæsthesia, to which we have referred, we may offer the following conclusions, upon which a fuller discussion may profitably turn:

1. In commencing the administration of ether the gradual method is to be preferred.

2. Its employment allows the lungs to empty themselves of residual air, prevents coughing and struggling, and places the organs in the best possible condition to receive and rapidly utilize the ether vapor.

3. After the stage of primary anæsthesia is reached, the more pure ether vapor the patient breathes the better.

4. The shorter the time of anæsthesia, and the smaller the amount of ether used, the less likely are the unpleasant sequelæ to occur.

5. The more evenly it is administered the less shock to the patient.

6. Anæsthesia should be entrusted to experienced administrators only.

7. Many of the fashionable efforts to resuscitate patients are not only useless but harmful.

8. The minimum amount of force should be employed to restrain the muscular movements of the patient.

9. Mixed narcosis is often advisable for prolonged operations.

10. The utility of the galvanic battery, in threatened death, is yet to be proven.

11. The most trustworthy means of resuscitating desperate cases are artificial respiration, hypodermic stimulation, inhalation of nitrite of amyl, and inversion of the body.—*Medical Record*, February 23, 1889.

**CREOLIN IN OPHTHALMOLOGY.**—DR. O. PURTSCHER gives the results obtained with creolin in the treatment of diseases of the eye. A 1 per cent. solution dropped on the conjunctiva of a eye produces a sensation of severe burning, which results in the eyelids being closely pressed together. This, however, is only momentary; the lids are soon reopened and large tears flow forth. After three or four minutes the irritation will have subsided entirely, save for a slight conjunctival irritation, which also soon passes off. Hence the



author recommends the use of cocaine before the application of creolin.

1. In simple conjunctivitis the results, as a rule, were good, especially in congestive catarrh, and in those forms complicated with inflammation of the corneal margin.

2. In conjunctivitis phlyctenulosa, the combined results of creolin with cocaine were admirable, especially in photophobia and scrofulous blepharospasmus.

3. Success was most marked in the papillary form of trachoma, the author having never seen such marked resolution of the papillæ from caustic treatment, as from that by creolin.

4. In blennorrhœa of the lachrymal passages, improvement was observed in many cases.

5. In all forms of keratitis with ulceration the deep ulcers healed rapidly; also ulcers with small hypopyum stood the creolin treatment admirably.

6. In parenchymatous keratitis the vascular growth was speedily arrested.

The author concludes that creolin is a powerful and valuable antiseptic, and at times to be preferred to the sublimate. It possesses another advantage in being non-poisonous, a fact that has lately been shown by Eisenberg.—*Centralbl. f. d. ges. Therapie*, January, 1889.

POISONING BY HYDRATE OF AMYLENE.—DR. DIETZ (*Deutsche med. Zeitg.*, 1888, No. 24) reports the following: A mixture containing hydrate of amylene was prepared for occasional administration to the patients of a clinic in Leipzig in order to procure sleep. Directions were given to shake the bottle before pouring out the dose. On one occasion the bottle was allowed to stand a few moments after having been shaken, and then four separate doses for four patients were administered. Amylene hydrate being of light specific gravity floats on water, the result being that the dose under these conditions was greatly increased. The symptoms produced in all four of the patients who took the drug were those of acute poisoning by alcohol—prolonged sleep, paralysis of the extremities, abolition of tactile sensibility and of the reflexes, dilatation of the pupils with feeble reaction to light, superficial, irregular respiration, and small, slow pulse. Hypodermatic injections of camphor was the treatment adopted, all the four patients recovering.—*Medical Chronicle*, January, 1889.

MYRTOL, the new disinfectant for the air-passages, is best given, says PROFESSOR EICHHORST, in gelatin capsules, each containing 0.15 gram of myrtol. The drug has a powerful and penetrating odor, which can be detected in the breath for two days after one capsule has been taken. To obtain the deodorizing and disinfectant effects in cases of putrid bronchitis and pulmonary gangrene, 2 or 3 capsules should be

taken every two hours, though the taking of so many as three capsules may cause loss of appetite. The effect is often wonderfully rapid, the bad odor disappearing from the sputa, and the sputa diminishing rapidly. Myrtol has no effect on tubercle bacilli.—*Therapeutische Monatshefte*, January, 1889.

CAFFEINE IN PULMONARY DISEASE.—TE GEMPT claims that the use of the double salts of caffeine is indicated in the course of acute fibrinous pneumonia when the heart begins to be enfeebled, the blood-pressure of the aortic system lowered, or when the pulse becomes unusually frequent or irregular. The use of the drug should be begun before symptoms of collapse appear. It should be used at the beginning of the disease in debilitated persons, drinkers, old people, and in subjects of cardiac disease. When used at the proper time and in sufficient doses it diminishes the frequency of the pulse and of the respiration, and increases arterial pressure, lowers temperature, and produces a sensation of well-being. It may, if necessary, be given by hypodermatic injections. After the period of apyrexia it is unnecessary to continue its administration. In atelectasis, hypostasis, emphysema, and pulmonary asthma, the double salts of caffeine are indicated as in heart diseases.—*Revue des Sciences Médicales*, January, 1889.

DETECTION OF ACETON AND DIACETIC ACID IN THE URINE.—To a portion of the urine in a test-tube add a few drops of a concentrated solution of sodium nitro-prusside, and make the mixture alkaline by the addition of liquor potassæ. The resultant red color fades in a short time, and when there is no trace of it left add a small quantity of acetic acid. If aceton exists in the urine, a marked violet color will result. Diacetic acid (ethylic ether) in urine, gives with perchloride of iron, a deep red reaction, which disappears on boiling. The urine of persons who have taken thallin, antipyrin, carbolic acid, or salicylic acid gives the same reaction so far as color is concerned, but the latter does not disappear on ebullition. If the urine is boiled before the perchloride is added, the reaction, in case diacetic acid be present, does not occur. The search for diacetic acid must be made very soon after the urine is passed, as the acid very quickly decomposes, forming aceton and carbonic acid.—*National Druggist*, February 15, 1889.

TREATMENT OF HYPEREMESIS GRAVIDARUM.—DR. GÜNTHER has obtained good results in five cases by the use of the constant current. The anode is applied, in the form of a sponge in a metallic shell covered with gutta-percha, to the cervix and the adjacent parts of the vagina; the cathode, in the form of a 10 × 20 cm. plate to the

region of the 8—12 dorsal vertebræ. The current is regulated by an Edelmann's galvanometer and a good rheostat, so as not to have too sudden or too powerful a current, lest abortion be produced. The strength of the current should be not more than 5 milliamperes, and the duration of the séance from 2 to 3 minutes at first, and afterwards from 7 to 10 minutes. When the current was applied daily, the vomiting was arrested in four days at latest.—*Centralbl für Gynäk.*, No. 29, 1888.

**INCOMPATIBILITY OF CHLORATE OF POTASSIUM AND IODIDE OF IRON.**—The *Bolletino Farmaceutico* calls attention to the reaction produced when potassium chlorate and iodide of iron are brought together; the sesquide-oxide of iron is thrown down and iodine is set free, as follows:  $2\text{FeI}_3 + \text{KClO}_3 = \text{Fe}_2\text{O}_3 + \text{KCl} + 4\text{I}$ . The administration of a dose of this sort produced the death of a patient in a short time, and the *Bolletino*, in discussing the matter, urges great caution in prescribing and dispensing such combinations.—*National Druggist*, February 15, 1889.

**CREASOTE AND COD-LIVER OIL.**—DR. SEITZ, of Heidelberg, says that a useful formula for the administration of creasote in phthisis and chronic catarrhal affections of the air-passages, is one with cod-liver oil. [Beechwood creasote should be used].

R. Creasote . . . . . 2.5 grams.  
Cod-liver oil . . . . . 200. "  
Saccharin . . . . . 0.1 "

S. Take a teaspoon to a tablespoonful once, twice, or thrice daily. These doses are for adults.

—*Therapeutische Monatshefte*, January, 1889.

**HOW TO PRESERVE URINARY CASTS.**—DR. CHAS. H. COCKEY, of Baltimore, says in regard to the opinion that urinary casts cannot be preserved: I have slides of urine, containing the different casts, blood, epithelium, etc., that were mounted ten or more years ago, and they are in as good condition as when first prepared. There are two formulæ used, one with glycerine, the other with acetate of potassium. I prefer the former. The latter grows dark with age, and throws down a precipitate. I have a bottle of each that I prepared eight years ago. The urine may be preserved in bottles, and used when desired, or the moist mounts may be made, finished in the usual manner and preserved in the cabinet.

Take of salicylic acid . . . . . 2 parts.  
Borax . . . . . 1 part.

Add sufficient glycerine to dissolve.

Add three parts water for coarse organisms, five parts water for fine.

It is needless to say that all water used for microscopic purposes should be distilled water.

No. 1, take of a saturated solution of acetate of potassium one part, water sixteen parts; mix and add salicylic acid to saturation.

Dr. James Tyson says, "a pinch of salicylic acid will preserve four ounces of urine." *Philadelphia Medical Times*, 5-20-82, page 571.

Dr. J. G. Richardson says, "equal bulk of dry acetate of potassium added to urine will preserve casts." Same, page 558.

I have been informed that Dr. Gray, of Richmond, Va., preserves urine by adding a few (2) grains of chloral to each ounce.—*Maryland Medical Journal*, February 16, 1889.

**LARGE DOSES OF ANTIFEBRIN IN SCIATICA.**—DR. AUSTIN FLINT reports in the *New York Medical Record*, December 1, 1888, a case of long-continued sciatica, which, after failure of packing the limb for thirty-six hours in the flowers of sulphur, nerve-stretching, and other remedies, was cured in forty-eight hours by giving antifebrin to the limit of physiological tolerance. The first day 50 grains were given within four hours, and the patient became somewhat cyanotic and weak, but was relieved by a dose of whisky. The second day 40 grains were given in two hours. The third day the pain was completely gone and the patient walked without difficulty.

**IODIZED GLYCERINE.**—DR. G. HAMMOND points out that a mixture of tincture of iodine and glycerine produces a greater effect on the skin than the pure tincture, possibly because the glycerine tends to prevent the evaporation of the iodine, and thus enables the whole of its powers to be utilized.—*London Medical Recorder*, Jan. 21, 1889.

**COCAINE IN THE TREATMENT OF ULCERS.**—DR. E. N. NASON, of Birmingham, has found cocaine of great use in the relief of pain caused by the dressing of burns, fistulæ and painful ulcers. He uses a 2 per cent. solution, and has it sprayed upon the surface directly it is exposed. This acts almost at once, and the dressing may be continued with very little pain, and in extensive burns, with much less shock. The solution should in such cases be used warm. In the case of fistulæ a few drops should be poured over the sinuses before they are packed. With a 2 per cent. solution there is little fear of constitutional effects, and it will be found to act as well and as quickly as a much stronger one.—*Brit. Medical Journal*, January 5, 1889.

**COCOANUT AS A TÆNICIDE.**—PARISI, of Athens, reports several cases in which the endocarp of the cocoanut acted as an efficient tænicide. No preparatory treatment is necessary. The patient drinks the "milk," and then eats the endocarp of the nut. This is followed by a feeling of abdominal uneasiness and pain, slight diarrhœa, and finally the expulsion of the tænia after some hours.

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THE NEGLECT OF CLINICAL TEACHING.

A little more than a year ago "A Traveler from New Zealand" anathematized the whole system of medical education in the United States because of the (as he supposed) universal neglect of hospital attendance by medical students. The "Traveler from New Zealand" published a letter on the subject, in the *New York Medical Journal*, which called forth some letters of protest against "generalizing from insufficient data." Doubtless the generalizations of the traveler from the antipodes were too sweeping, since in some (a few) of the medical schools in this country the clinical teaching is of a high order; in others the clinical teaching is defective; in not a few it is, to all intents and purposes, omitted, or neglected by the students, since it is not compulsory. One may get an idea of the extent of clinical teaching in the medical schools in this country by referring to the annual announcements of the medical colleges, or to the "Fifth Report of the Illinois State Board of Health on Medical Education."

Taking first the 13 Canadian medical schools, we find that the teaching in them is regulated by the Provincial Medical Acts. That of Quebec, which is applicable, practically, as regards clinical teaching, to all the Provinces, requires, as regards clinical teaching: He (the candidate for license to practice medicine) shall have attended the general practice of a hospital containing not less than fifty beds under the charge of not less than two physicians or surgeons, for a period of not less than one year and a half, or three periods of

not less than six months each; and he shall have also attended six cases of labor. Some of the Canadian schools require twenty-four months' hospital attendance, some require eighteen months, some sixteen months' attendance on the practice of a lying-in hospital. In Halifax the candidate for the degree must have attended during one calendar year the practice of the Victoria General Hospital, or that of some other hospital approved by the Senate of Dalhousie University; he must have attended six cases of midwifery, or for six months the practice of lying-in hospital approved by the college; and must have attained proficiency in the practice of vaccination.

Not one of the Medical Practice Acts in force in the United States distinctly prescribes clinical teaching. The only rule of any board of health or examiners in the United States that bears on this subject is Section V of the "Schedule of Minimum Requirements" of the Illinois State Board of Health. What are the college regulations in this respect? There are 90 degree-conferring regular medical schools in the United States; of these, 31, or 30.44 per cent., require that the candidate for graduation must have had clinical instruction, or must have attended clinical lectures. In some cases the statements are exceedingly vague, *e. g.*, "he must have attended clinical lectures and dissections." It may be remarked that a student may *attend* clinical lectures and learn but little, just as he may *attend* dissections and not learn practical anatomy. While we do not assert that students may be graduated from 59 of the 90 regular medical schools of the United States without having received clinical instruction, this is certainly a fair inference; and we do not believe that this inference falls far short of the truth. Medical colleges are not prone to make their requirements appear less than they are.

What of bed-side teaching? Are there a dozen schools in the country the students of which are familiarized with disease at the bed-side? We doubt if there are, excluding the Canadian schools. It may be said that bed-side teaching is practically impossible in many of the schools, on account of the large number of students. But the question is as to what should be done. The graduate that has not had bed-side instruction is not fitted for the practice of medicine; he may learn in time, but for all that he is not a proper

person to take charge of a case of illness. To us it seems a self-evident proposition that the practical examination and treatment of patients is a necessary feature of the instruction of the medical student and of the examination for the degree of or license to practice medicine.

In a letter to the *New York Medical Journal*, regarding the communication already referred to, Dr. Duncan Ross says: "We cannot close our eyes to the fact that . . . . medical teaching is very largely didactic, and that students do not, except to a very limited degree, avail themselves of the clinical material in our hospital wards. There are several reasons for this neglect of teaching at the bed-side, among which we may enumerate: 1. That students have been for so long a time drilled in didactic teaching at the expense of clinical work. 2. That medical clinics in the amphitheatre are practically the same as didactic teaching, the classes being so large that those in the front seats only can avail themselves of the signs and symptoms elicited. 3. That students are graduated after an examination on the didactic instruction, and not on their knowledge of the art of medicine as taught at the bed-side. And we might further add that clinical teaching has been prohibited by the governing boards of many of the institutions for the sick. The best way to stimulate interest in clinical study in the student is not by an eloquent discourse on signs and symptoms and morbid conditions, but by making him, under competent supervision, elicit signs and symptoms for himself and accustom himself to the treatment given; and, in the event of death, making him conduct the autopsy in a systematic way, under competent supervision. To replace, in a measure, didactic by clinical teaching will necessitate radical changes in our present methods of teaching medicine. No one man can hope to teach the *art* of our profession successfully, in any of the practical departments of medicine, to five or six hundred students."

When Graves was elected physician to the Meath Hospital, Dublin, in 1821, clinical investigation and clinical teaching scarcely existed. Students were not taught to observe cases, and were not trained to do so. "They might," says Bettany, "obtain their degree without having ever practiced diagnosis or co-operated in curing disease even to the extent of writing a prescription." "Often have I regretted," said Graves in

his first lecture at the Meath Hospital, "that under the present system, experience is only to be acquired at a considerable expense of human life. There is, indeed, no concealing the truth—the melancholy truth, that numbers of lives are annually lost in consequence of maltreatment. The victims selected for this sacrifice at the shrine of experience generally belong to the poor classes of society, and their immolation is never long delayed when a successful candidate for a dispensary commences the discharge of his duties . . . nor is the possession of wealth in every instance a safeguard against the blunders of inexperience." At this time, says Stokes in his biographical notice of Graves, the student was kept at a distance; no one cared to show him how to teach himself, to familiarize him with the "ways of the sick," to train his mind to reason, and to inculcate the duty and pleasure of original work.

In THE JOURNAL of August 4, 1888, p. 178, we reprinted from the *Maryland Medical Journal* a note by Dr. George J. Preston, of Baltimore, on "Teaching in the London Hospitals," in which he says: "the teaching is done not by lectures, or, at least, very little in this way, but in the wards. The students are taught to take the histories of the cases, and the chief carefully goes over the history of each case, pointing out characteristics and peculiarities, and directing the examinations which each student makes for himself." The extent to which this method of teaching is practiced in this country is far too limited. The medical student in the United States sees, as a rule, many surgical operations, but has, as a rule, little individual instruction in surgical diagnosis and operative surgery; he hears lectures on cases of diabetes, phthisis, etc., and rare forms of disease, but has little opportunity to examine personally examples of disease that he will meet with in daily practice. He may graduate from some of our colleges without knowing how to make an analysis of urine. Clinical teaching in the dead-house—if we may use such an expression—is also too much neglected.

We know that there are some colleges in the country in which clinical teaching is a prominent feature of the courses; but these colleges are too few. Medicine cannot be learned from books and didactic lectures alone.

## MEDICAL LEGISLATION.

At the present time the legislative bodies of many of the States are in session, and before several of them are bills or forms of law designed by their authors to better regulate and foster the education and practice of the medical profession. None of these bills are so framed as to produce with reasonable efficiency all the practical results for which they are intended, and no two of them agree in their essential details. In a great country like this, divided into forty-two States, and yet permitting the utmost freedom of intercourse and of migration from one State to another, it is exceedingly desirable that the laws regulating the education and practice of professional men should be so nearly alike in their essential provisions, that a license obtained in one State should be recognized by the licensing authorities of every other State. The only legitimate object for the enactment of State laws regulating the education and practice of medical men, is to secure an educated and skilful profession, and thereby protect the people from the disastrous effects of ignorance and imposition. To secure this most desirable object, the laws must be so framed as to require every person proposing to study and practice medicine to have, first, a good knowledge of the elementary branches of literature, the mathematics, physics and the natural sciences, with the mental discipline that such a degree of general education necessarily develops; second, the devotion of three years to the diligent study of the several branches of medical science and art, at least six months of each year to be spent in a medical college of recognized good standing; and during the second and third years the college attendance must include clinical instruction in a public hospital containing a daily average of not less than fifty patients; third, the appointment of a competent State Board of Medical Examiners charged with the duty of examining such persons as propose to commence the study of medicine, and grant certificates to those found qualified and register them as students; and also the duty to thoroughly examine all applicants for license to practice medicine and surgery in the State, and issue licenses to those only who are found qualified by the possession of a practical knowledge of all the recognized branches of medical science and art, and of a good moral character.

The three foregoing items must be essential

parts of every law that can be executed in such a manner as to eliminate ignorance and imposition from medical practice, and afford the highest degree of protection of the public and individual health. In almost all other details, such as the number of members to constitute the State Board of Examiners; the term of their office; by whom they shall be appointed; the times and places at which the Board shall hold its meetings and keep its records; the fees to be charged, etc., may vary to suit the exigencies or caprice of the several legislative bodies. But while almost all concede the correctness of the demand for a fair general education as a necessary preparation for entering upon the study of medicine; the devotion of at least three years to the direct study of medicine and surgery in medical colleges and hospitals; and for a competent State Board of Examiners to determine the qualifications of all who propose to study and practice the healing art, there appears to be much difficulty on the part of committees, both legislative and medical, in framing the details of bills in such a manner as to reach the practical results desired. To aid those engaged in such work and at the same time make our views more plain, we give a form for legislative enactment on another page, under the head of "proposed medical legislation," and invite attention to both its principles and its details. Two of its essential features now exist in the laws in force in Minnesota, Virginia, North Carolina, Alabama, and perhaps some other States, but in none of them is there provision for enforcing an adequate general education before entering upon the study of medicine, or for securing proper attention to clinical study.

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 THE VALUE OF SULFONAL.

This hypnotic has now been before the profession long enough to give some idea of its merits, and there is little discrepancy, thus far, in the accounts of its effects furnished by different observers. Administered in doses of from 15 to 30 grains it usually induces quiet sleep for several hours without subsequent unpleasant effects. Owing to its sparing solubility in water, it is slow in its action, an hour and a half to two hours usually elapsing before the full effect of the drug is experienced.

DR. W. L. WORCESTER, Assistant Physician to

the Arkansas State Lunatic Hospital at Little Rock, has communicated to us the results of trials of sulfonal which have been made there since the middle of November last. It has been administered to seventeen different patients, being nearly all the cases in which the use of hypnotics was thought advisable during that time. Only one patient, a large, powerful man, in a state of violent excitement, proved entirely refractory. In his case three doses, of 20 grains each, administered in the course of one night, failed to produce any perceptible effect. With this exception, 20 grains was the maximum dose, and this amount did not fail in any case to produce sleep, lasting usually from five to eight hours. No undesirable effects on the circulation, appetite, digestion or general condition of the patients were noticed in any case. To most of the patients only a few doses were given, but in one case the administration was continued for thirty-six days, in another for twenty-three. In neither of these cases was it necessary to increase the dose; on the contrary, it seemed more effective in the latter than the earlier part of its administration, and in one case the patient, who had been for a number of months very noisy, seemed to be permanently improved.

A few cases have been reported in which the administration of the drug was followed by a rash that lasted, with troublesome itching, for two or three days. With this exception, the only case of serious toxic effects that has come under our notice is reported by Bornemann (*Deutsche Medicinal-Zeitung*, No. 95). The patient, who was endeavoring to break off the morphine habit, received 60 grains of sulfonal at bedtime. This failing to give sleep, 30 grains additional were administered at 1 A.M. Shortly afterward he showed symptoms resembling those of alcoholic intoxication; had double vision and the feeling of having two heads and two pairs of arms. Although no more of the drug was administered, the symptoms did not entirely pass off until the sixth day. Forty-five grains had previously been administered in one dose, with satisfactory effect.

This case would seem to show that some caution should be exercised in administering this, like most other remedies profoundly affecting the nervous system. In the light of experience with drugs of its class, it is probably not to be expected that it will be entirely free from deleterious effects, but it seems likely to prove as little objectionable

on that score as any hypnotic thus far discovered. Its tastelessness is an advantage not to be lightly estimated. The principal drawbacks developed thus far are the slowness of its action and its high price.

Hypnotics, as a class, are palliative rather than remedial agencies, and this is no exception to the rule. It is much better, where practicable, to remove the cause of sleeplessness than to attack the symptom, but there is a legitimate field for remedies of this class, and there seems little reason to expect a cessation of the demand.

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#### THE LOMB PRIZE ESSAY AND THE NEW YORK HERALD.

Through its Secretary, Dr. Irving A. Watson, the American Public Health Association publishes a circular to the public, saying that after the Milwaukee meeting of this Association, Mr. Henry Lomb received a telegram, signed by James Gordon Bennett, asking for the Lomb Prize Essay entitled "Practical Sanitary and Economic Cooking for persons of Moderate and Small Means," which had just been awarded the \$500 prize, for publication in the *New York Herald*. In response to this, Mr. Lomb and the Secretary, believing that it would be a good medium through which to present this very able and valuable essay to the public, went to New York and had an interview with Mr. Bennett's representative. Almost the first question propounded by the representative was, "What do you ask for the essay?" He was informed that it was not for sale at any price, but that if the *Herald* would publish it in full, it should have the privilege of first presenting it to the public. The representative critically examined the manuscript, acknowledged its great value, and, after making a careful estimate of the number of words it contained and the space it would occupy in the *Herald*, accepted the proposition, and agreed to and did pay for a type-written copy of the same. Mr. Lomb and the Secretary then left, with the full understanding that the entire essay was to appear in the *Herald* at its first convenience. The Secretary ordered fifty copies of the *Herald* that was to contain the essay.

Instead of printing the essay as it was written, the *Herald* mutilated it almost beyond recognition, omitting the scientific portion of it, including the discussion of Food Principles and their functions, omitting also the bills of fare for those in moder-



ate means and the poor—this being the very part of the essay for which the prize was offered. To make matters still worse, "That part of the essay which the *Herald* printed is misleading, inasmuch as it is made up from extracts in some instances taken from different parts of the original, and put together as a continuous production. Portions of the essay were transposed, new headings inserted, sentences broken in two, and words not in the manuscript interpolated. The editor also attempted to stamp his personal opinions and prejudices upon the paper, by the use of display type, in several places." And "instead of the legitimate heading which accompanied the type-written copy of the essay, the editor substituted one, which from a literary stand-point, would be discreditable to the cheapest and most irresponsible publication extant. It contained such expressions as, 'The Devil sends the Cook, but the *Herald* sends forth an Antidote,' 'Indigestion Knocked Out,' 'Girls, the Road to a Man's Heart is through his Stomach,' 'An Abel Essay,' 'Miss Mary Hinman Abel took the Cake,' " etc.

The above statement is made to remove the unjust imputation of inferiority of the essay and incompetency of the judges, which the garbled extracts in the *Herald*, have placed upon them, to say nothing of the violation of understanding in reference to its publication. "The essay, which will soon be given to the public in an authorized form, needs no defence, but it should not be judged by the extracts above referred to. The concluding remarks in the report of the Committee of Award show their appreciation of it, after a critical examination. 'The Committee consider it a duty, in awarding the prize, to emphasize the fact that of all the essays submitted the one selected is not only preëminently the best, but that it is also, intrinsically, an admirable treatise on the subject. It is simple and lucid in statement, methodical in arrangement, and well adapted to the practical wants of the classes to which it is addressed. Whoever may read it can have confidence in the soundness of its teachings, and cannot fail to be instructed in the art of cooking by its plain precepts, founded as they are upon the correct application of the scientific principles of chemistry and physiology to the proper preparation of food for man.' "

It is not to the discredit of Mr. Lomb and Dr. Watson that they were thus imposed upon by

unscrupulous newspaper men. It is to be regretted that they had only a verbal understanding, especially with the *New York Herald*, which has been in existence long enough for most people to be conversant with its methods. Should any of the essays be published in newspapers in the future, we would suggest that a written agreement be obtained, and that they be sent to several papers for simultaneous publication.

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#### THE FORTIETH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

On another page will be found a full and official notice of the coming meeting of the Association, in Newport, Rhode Island, commencing June 25, 1889. This notice of the Committee of Arrangements indicates careful methodical work, excellent accommodations for all Association interests, and a commendable spirit of true *fraternity*. We hope the profession will respond in the same spirit from every State and Territory of the Union. Now is the time for those intending to present papers in any of the Sections, not only to notify the Chairman or Secretary of the Section, but to engage diligently in the work of preparation, that their work may be well considered and complete when presented.

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#### EDITORIAL NOTES.

THE EIGHTH CONGRESS OF THE GERMAN SURGICAL SOCIETY will be held in Berlin on April 24-27. On the first day Professor von Esmarch will open a discussion on the "Etiology and Diagnosis of Carcinoma, especially of the Tongue and Lips," after which there will be an exhibition of patients that have survived for more than three years operations for carcinoma of the tongue, rectum and stomach. The permanent secretary of the Congress is Professor Dr. Gurlt, W., Keithstrasse No. 6., Berlin.

PROFESSIONAL CRAMPS.—This age of division of labor has given rise to a variety of functional spasms, or professional cramps, of which writer's cramp is the type. Cases of such functional spasm have been reported in pianists, violinists, telegraphers, photographers, watch-makers, shoemakers, tailors, sempstresses, cigar makers, milkers, blacksmiths, dancers, etc. M. FÉRÉ has recently communicated to the Société de Biologie a case of flutists' cramp. When the patient

wished to play his instrument, the last three fingers of his right hand became cramped in a painful manner, the spasm affecting both the flexors and extensors of the fingers. The patient was cured by massage and hydrotherapy. Remak some time ago presented to the Berlin Medical Society a patient affected with milker's cramp. When she tried to do her work, her hand became convulsively closed, the thumb being flexed in the hand. She was obliged to give up her occupation. From the fact that his patient was cured without giving up his work, M. Féré concludes that professional cramps occur only in those predisposed to them, and bear no relation to the local fatigue of organs. In support of this opinion Brown-Séquard cited the case of a journalist who was attacked by writer's cramp in the right hand, then in the left, and finally in the foot, with which he attempted to write. Dumontpallier has reported the case of a patient that had cramp in the right hand when he attempted to write with the left hand. This fact of associated or synergic movements says De Ranse, is much more easily explained by the hypothesis of the central than than of the peripheric origin of the functional spasm. Remak noted in his case marked diminution of sensibility in the hands, especially in the region supplied by the median nerve, and he attributes the trouble to a peripheric neuritis, due to excessive use of the hands.

THE MEDICO-CHIRURGICAL ACADEMY OF SPAIN has set the following questions for its prize for 1889: 1. Critical Study of Antiparasitic Medications—in medicine, surgery, and obstetrics. 2. Critical Examination of Lithotritry, Lithotomy, Litholapaxy, and Perineal and Suprapubic Cystotomy. The essays must be in hand by September 15; they may be written in Spanish, Portuguese, French, Italian, English, or German.

THE INTERNATIONAL PHYSIOLOGICAL CONGRESS will be held in Basle on September 10, 1889. The Committee in charge has chosen co-workers in different countries; the American representative is Dr. H. B. Bowditch, of Boston.

THE CURE OF TUBERCULOSIS.—M. Jules Lebaudy, a wealthy manufacturer of Paris, has recently, on the advice of his physician Dr. Paquelin, subscribed 10,000 francs to a fund for the encouragement of studies on the cure of

tuberculosis. The total amount subscribed on February 15, was 74,656 francs (\$14,931). If, says the *Gazette Médicale de Paris*, the millionaires, who are not very rare, would follow this example, the near future would see scientific researches and their practical application for the good of humanity.

PHYSICIANS IN THE ITALIAN SENATE.—There are now four medical men in the Italian Senate: Dr. Minich, of Venice, Professor Durante, of Rome, Professor Todaro, of Rome, and Professor Cantani, of Naples.

TRANSACTIONS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.—Any member of the Congress entitled to the Transactions who has not received them, either in this country or Europe, should notify the late Secretary-General, John B. Hamilton, M.D., Washington, D.C., as some parties have changed their residences since their names were registered at the Congress.

## ASSOCIATION NEWS.

American Medical Association. Fortieth Annual Meeting.

To be held at Newport, R. I., June 25, 26, 27, and 28, 1889.

### OFFICIAL NOTICE.

The Association having departed from its usual custom of convening in the chief cities, by deciding to meet the present year at a simple watering place that, despite its repute, is without certain of the resources hitherto relied upon, the Committee of Arrangements ask in advance for the kind consideration of the multitude of physicians whom they trust soon to welcome. A fact or two in this connection may perhaps be stated. Ordinarily a great many local medical men are appointed to aid the Arrangements' Committee, and thereby the duties of each are rendered less onerous. In the present instance, of the eighteen names fifteen comprise the sum total of the resident (regular) physicians of Newport, while the remaining three are dental practitioners. The Committee is therefore this time absolutely "of the whole." Of its number but a single one has ever been a member of the Association, or even attended a meeting. All who comprise it are, however, heartily in accord, and will do their best, trusting that their good will may make amends for their lack of previous experience.

THE COMMITTEE OF ARRANGEMENTS is constituted as follows: Drs. C. F. Barker, M. E.

Baldwin, C. A. Brackett, J. P. Curley, P. F. Curley, J. P. Donovan, H. Ecroyd, Jr., V. M. Francis, T. A. Kenefick, H. G. MacKaye, G. M. Odell, F. H. Rankin, W. C. Rives, Jr., E. P. Robinson, S. H. Sears, W. S. Sherman, H. R. Storer, and H. E. Turner, of Newport; Surgeon S. M. Horton and Asst. Surgeon R. W. Johnson, U. S. A., of Fort Adams, and Surgeons J. C. Wise, of the Torpedo Station, and T. L. Neilson, and Asst. Surgeons Arnold and Von Wedekind, of the Naval Training School, U. S. N., *ex-officio*; and, as an Associate Committee appointed by the Rhode Island Medical Society, Drs. G. D. Hersey, W. H. Palmer and G. T. Swarts, of Providence.

#### THE SUB-COMMITTEES ARE:

*Finance*.—Drs. Rankin, MacKaye and Hersey.

*Reception*.—Drs. Turner and Odell.

*Halls and Accommodations*.—Drs. Barker and Baldwin.

*Entertainment*.—Drs. Sears and Kenefick.

*Invitations*.—Drs. Rives and Swarts.

*Registration*.—Drs. Ecroyd and Sherman.

*Exhibits*.—Drs. Brackett and Robinson.

*Transportation*.—Drs. P. F. Curley and Palmer.

*Section Work and Programme*.—The Chairman and Local Secretary.

If, as occasion may arise, correspondents will kindly address the respective heads of the Sub-Committees, it will very materially lighten the labors of the Chairman-in-chief. It is probably generally understood that the titles of papers to be presented to the Sections should, in the first instance, be sent to their Chairmen. Already a large number of communications have thus been listed, and there is reason to expect that the meeting will be a peculiarly interesting one in this regard, but to ensure a hearing at all early in the Session, there should be no longer delay upon the part of contributors.

The Local Secretary appointed at Cincinnati by the Association, having, in consequence of removal to another city, resigned his position, the Committee were for a while embarrassed. Dr. Valentine Mott Francis, formerly of New York, has however, consented to fill the vacancy, at the unanimous request of his colleagues. Though Dr. Francis has for some years retired from practice, he has none the less retained his interest in the profession, which in the past, was so honored by those whose famous names he bears.

It was thought best, after consultation with the other officers of the Association, to postpone the date of meeting from the first to the last Tuesday (the 25th) of June, for the reasons that the chief hotel of the place would not open until that date, and that earlier the town would not be so attractive, nor the weather as likely to be favorable.

The general Sessions will be held at the Music Hall, Bellevue Avenue, adjoining the Ocean House, and those of the Sections at the Newport

Casino, also immediately contiguous, which for the first time in its history, and as an act of courtesy, is permitted by its Governors to be occupied for other than the purpose for which it was built.

The hotels are, in order of their nearness to the place of meeting, the Ocean House, the Clifton House, the Germania Hotel, Pinard's, Hartmann's, the Aquidneck, Brayton's, the Kay-Street House, the Perry House, the Park House, the Sherman House, the Cliff Avenue Hotel, and Bateman's. It is as yet uncertain whether there will be, by the time of meeting, a new hotel at the Newport Beach.

The meeting of the Association occurs nearly synchronously with the two hundred and fiftieth anniversary of the settlement of Newport. The City authorities will probably fittingly recognize the presence of the National Medical Convention at such a moment, the more cordially since the virtual founder of the colony, certainly its principal leader, John Clark, was a physician. It will add to the interest of the occasion that the now Mayor of the City was one of the incorporators, in 1879, of the Newport Sanitary Protection Association, and is the parent of a rapidly rising physician, in New York.

The ancient name of Newport Island was "Aquidneck," or "The Isle of Peace." In view of this, it is to be hoped that the wisdom of the Association in turning away, the present year, from the mutual rivalries and the internal dissensions inseparable from the great centres of practice and of medical education, to what is virtually neutral ground, may be made manifest, and that the coming Session may prove one of the largest, most harmonious, most scientific, and best contented meetings that has yet been held.

HORATIO R. STORER, M.D.

*Chairman Committee of Arrangements.*  
Newport, R. I., Feb. 25, 1889.

## SOCIETY PROCEEDINGS.

Gynæcological Society of Boston.

*Regular Meeting, October 11, 1888.*

THE PRESIDENT, HORACE C. WHITE, M.D.,  
IN THE CHAIR.

Richard J. Thompson, M.D., of Fall River, Mass., was elected to active membership, and John B. Learned, M.D., of Florence, Mass., was elected to corresponding membership.

DR. HENRY O. MARCY read a paper on

THE PERINEUM; ITS ANATOMY AND PHYSIOLOGY,  
AND THE METHODS OF RESTORATION  
AFTER INJURY.

The importance of this subject, and the differ-

ences of opinion yet held by many of the leading authorities, both in Europe and America, seem sufficient to make the theme one of marked interest to the profession at the present time. All good surgery must be based upon a thorough knowledge of anatomy, and while this is essentially true in the consideration of every operative measure, it is especially to be emphasized where the avowed object of the operator is the restoration of the injured parts to their former normal condition. This is the problem confronting the obstetric or gynecic surgeon when he undertakes to deal with lesions of the pelvic floor.

The description of the anatomical structure of the pelvic floor in most of the text-books appears to me faulty, and on this account much confusion occurs, not only in the use of names applied to certain parts, but especially in involving the whole subject in unnecessary complexity. The comparison between the component structures of the male and female pelvis shows a closer analogy than is at first apparent. The levator ani in the male is inseparably blended with the sphincter ani. The transversalis perinei in a central tendinous line joins with the levatores and sphincters in front of the anus, and anteriorly between this point and the accelerator urinæ and erector penis there exists an irregular space, floored by the deep perineal fasciæ, called the triangular ligament of the urethra. This corresponds to the vaginæ opening in the female. The erector penis and erector clitoridis are similar in position and function. The accelerator urinæ, or ejaculator muscle, separated in the median raphe, is not very unlike the sphincter vaginæ muscle. The transversi perinei are placed more obliquely in the male than in the female, and are often less well developed.

Reference was then made to the dissections of Dr. Henry Savage, of London. These studies, supplemented by the important teachings derived from frozen sections, greatly modify the previous views of the physiological relationship of the pelvic organs. The depth of the perineum is less than is usually described. The axis of the anus cuts that of the vaginæ at nearly right angles, and leaves in the external angle an irregular, flattened portion of tissue, rarely, when examined upon the living subject, more than  $\frac{1}{2}$  an inch in thickness. In the nulliparous woman this is clearly defined as a firm portion of the pelvic floor, and is composed of skin, fat, elastic and connective tissue, transverse muscles sustaining fascia, and the anterior portion of the sphincter ani. The vaginæ side is usually slightly concave, and the rectal side is convex, owing to the inter-blending of the sphincter ani. If the finger is carried up just within the perineum proper, and a little to either side, there can be felt the firm enclosing band of the levator attachments to each of the rami of the pubes above, and descending

to join with the posterior fibres of the sphincter ani and coccygei. In the perineum posteriorly this is firmly interblended upon either side with the transverse perineal muscles. These are under the control of volition in a considerable degree, and acting conjointly serve to draw the vagina forward on to the pubes.

The sacral prominence throws a large proportion of the abdominal weight upon the symphysis pubis and the recti muscles, in the support of the body, and thus relieves the pelvic basin and takes off undue strain from the pelvic floor. The rectum is rarely entirely empty, is circular in shape, serves the digestive apparatus, in a measure, as a constantly receiving reservoir and, when not disturbed, may be felt from the vagina as a tube curving posteriorly. It is suspended and supported—slung, so to speak—by the levator ani muscles which hold the vagina in their encircling loop. On the contrary, the vagina, entirely unlike the earlier diagrams, is flattened antero-posteriorly upon itself and its walls are, when at rest, ever in close apposition. The vagina joins with the vulva at right angles to its lateral opening at the entrance of its passage through the pelvic floor. The vulvar organs are all intimately blended with and go to form a part of the perineum proper. On each side of the vaginal orifice are the erector clitoridis, the bulbo-cavernosus, and the transversus perinei muscles, and these, with the levator ani, make up in a large measure the pelvic floor. The bulbi-vaginæ and the Bartholini glands are covered by these muscles with their entire plexus of vessels, abundant distribution of lymphatics and nerves. The erector clitoridis, and bulbo-cavernosus muscles, with the transversus perinei, join each side to constitute the ovate muscular vaginal orifice, and in their conjoined action perform a very important physiological function in sexual congress, often underestimated or ignored.

The much discussed, so-called perineal body has, in my opinion, misled some of our prominent authors into false positions, and caused great confusion and misunderstanding among physicians.

I have been criticised, in emphasizing the muscular floor of the pelvis, that I underestimated the importance of the variously distributed connective tissue and fascia. This is not by any means my intention. The superficial perineal fascia, in its deep layer in the male, as well as in the female, covers and incloses the transversus perinei muscles, forming strong ligamentous transverse bands uniting in the perineum, designated by Savage as ischio-perineal ligaments.

The pubo-coccygei, acting in unison with the other muscles of the pelvic floor, draw forward, and thus aid not only in closing the rectum, but hold both it and the vagina in the anterior curve, so important to be retained for the preservation of normal function. A horizontal section, made

through the floor just above the sphincter vaginae and posterior to the junction of the transversus perinei, shows the deeper fibres of the pubo-coccygeus, united in a loop behind the lower border of the rectum, holding it from the fixed point at the pubes, as in a sling. This loop is connected with the transversus perinei, bulbo-cavernosus, erector clitoridis, sphincter vaginae, and sphincter ani muscles by strong layers of connective tissue, the importance of which, for union and support, cannot be readily overestimated.

We have already observed that the circular loop of muscular fibres of the bubo-coccygeus, posterior to the anus, carries the rectum forward on to the vagina and changes the vertical vulvar outlet into an antero-posterior closure of the vaginal canal, and this again is thrown into two lateral folds. The longitudinal muscular fibres external to the vaginal muscle, and which extend, both in front and behind the vagina, along the distal third, are the chief cause in producing this intra-folding, constituting in large part the so-called columnæ rugarum. The letter H shape, thus given to the vaginal column in section, is well known in the arts as the form adapted best for the resistance of vertical weight. This elastic column, retained in its shape and position by its vulvar and perineal support, in its upper border is blended with the cervical tissues. The union thus made with the uterus is at nearly right angles to the vagina, and serves to hold the lower segment of the uterus backward, retaining that organ, like a ship at anchor, swung on its lateral supports, with freedom of mobility at its moorings. This vaginal support to the uterus is so effective, in the normal condition, that the cervix uteri is rarely displaced without there first ensues a change in the vagina. In a sense, muscle and fascia are equally important, since the one fails in its function without the support of the other.

I have carefully reviewed our present knowledge of the anatomy and physiology of the pelvic floor, since all attempt at a restoration must, in large measure, depend upon our understanding what we mean to restore.

It should be taught as cardinal that the obstetrician has not completed his duty to his patient until he has carefully examined, in a good light, the vaginal outlet. There is still considerable difference of opinion if an attempt at immediate repair is advisable. This has been questioned, since the bruised and raggedly torn tissues seem unsuited for primary union, and the lochial discharges liable to infect the wound.

Antiseptic midwifery, however, has abundantly demonstrated the error of such conclusion. When the parts are maintained aseptic, the union rarely fails, and if by any reason this should not take place, the patient is rendered none the less fitted for subsequent operation. The torn tissues are very vascular, extraordinarily developed in prepa-

ration for the parturient act, and paralyzed, in a measure, by the extreme tension to which they have been subjected. All this favors a rapid plastic repair. There can be little doubt the time is not far distant when the patient will rightfully demand of the practitioner as rigid care in this respect as in any other part of her supervision.

The primary operation is comparatively simple and often will not require an anæsthetic. A solution of cocaine is frequently of service. Under irrigation with sublimate solution, the vaginal vault is temporarily lightly tamponed to retain the uterine flow, with one or two fingers in the rectum, unite the parts with a deep continuous buried suture of tendon. The torn muscles are not retracted and lie easily in apposition. The deep sutures are limited to the perineum, and should be so placed as to be covered by the superficial vaginal lines of union, and are four or five in number, taken with the double continuous stitch hereafter described. More recently I have modified the operation further by commencing at the upper angle of the wound, closing it by a tendon suture applied as a blind stitch. This is best effected by a straight Hagedorn needle, lightly but accurately piercing the connective tissue, beneath the mucous membrane, from side to side. The sewing is continuous in the same way over the fourchette posteriorly to the limit of the division of the skin. Thus the divided edges are brought evenly into apposition without the vestige of a stitch in sight. The parts, carefully dried, are dusted with iodoform and covered with iodoform collodion. The tampon is replaced by a light packing of iodoform wool, and, if the operation is done aseptically, the repair goes on as in a subcutaneous wound.

If the rupture extends into the rectum, the lower bowel having been well washed with sublimate, care being exercised not to allow retention, and tamponed with iodoform wool, the rectal mucous membrane is closed with great care, the stitches being continuously taken as above described. This is carried to the anal opening and the suture left uncut. When drawn sufficiently tense it becomes a buried suture, and the rectal mucous membrane lies in close apposition. The operation is then continued as in incomplete rupture, the double suture (the Marcy stitch) also carefully enclosing the divided sphincter. When the edges of the two anterior sides of the triangle have been coapted by the buried suture, the end is joined to the rectal suture in front of the anus. Although I have usually retained the united parts at rest without strain for some days, by means of a lateral support, as a sort of splint, with parallel pins applied in halves and joined like a safety-pin,<sup>1</sup> in a number of instances I have omitted this support and complete union followed without pain or even œdema of the parts.

The operation is to be commended for its sim-

<sup>1</sup> Vide THE JOURNAL, October 27, 1883.

licity in application, the comfort of the patient, as well as assurance of result. A word of caution may be required that the tissues are not drawn too taut, since retention in easy apposition is to be sought, and constriction of tissue avoided, as, even in an aseptic wound, injury must otherwise result.

There is a large class of injuries to the pelvic floor, incident to child-birth, usually overlooked or underestimated, because the external orifice shows no material damage. These concealed injuries are due to a submucous tear of the transversi or a rending of the pubo-coccygeus from its posterior attachment. It is exceptional that the injury is symmetrical.

There is a series of severe injuries where the vagina shows no evidence of lesion, and a deep post-vaginal injury to the muscular groups can usually be demonstrated. The finger no longer feels the firm ridge of the transversi muscles closing the vulva posteriorly. The pubo-coccygeus is felt as a large, open loop, passing obliquely backward into the pelvis, changing in a marked degree the plane of the pelvic floor. A careful study of the differences between these and the normal conditions renders this injury readily recognizable.

Dr. Marcy than gave a very careful review of the literature of the whole subject of injury to the floor of the pelvis and the repair of these injuries. Continuing he said: In the earlier part of this paper, I endeavored to show the anatomical relation of the parts, when normal; the more exact conditions of the structures as usually found after injury, and their perverted physiological action, producing various degrees of suffering. It was demonstrated that the changes in the vaginal structures were not generally due to a primary injury of this muscle or its mucous covering, but to secondary forces brought to bear upon it, called into action by the modified relations of the muscles of the pelvic floor; the transversi perinei no longer supporting and holding in place the other groups, but on the contrary, retracting towards their origin and thus everting, the vulvar opening; the levators ani, not able to act as a suspensory band, pulling forward and closing the vaginal canal, but on the contrary, freed from their central moorings, drawing the anus upward and backward. These, of course, are accompanied by changes in vascularity and innervation, by weakening of the pelvic fascia, by absorption of the fat and elastic tissue, by defective action of the bulbo-cavernosus, erector clitoridis, and sphincter vaginae muscles, by consequent imperfect circulation in the erectile tissues, and perverted gland secretion. The ultimate effects are a bladder weakened in support, a distorted rectum, a displaced uterus, each factor adding to the other, until the sum total of discomfort renders life often a grievous burden.

Dr. Marcy then referred, with quotations to his papers read before the American Medical Association in June, 1883, and the Eighth International Medical Congress in August, 1884, and other publications, and he showed conclusively that he was the first to use the buried animal suture in perineorrhaphy, which he had used for the radical cure of hernia in 1871.

In conclusion, Dr. Marcy described his operation as follows: In complete ruptures, with more or less prolapse, the transverses perinei muscle can no longer be felt as a band in front of the rectum, and the pubo-coccygeus has lost its tonicity. The restoration of these, with the various attachments of the sundered groups, is the object sought. The patient, etherized, is placed on a table, in a good light. The limbs are flexed, and both thighs are carried closely on to the abdominal wall. This position is retained by the aid of assistants or the Clovis crutch, which has been simplified by Dr. Kelly, of Philadelphia. Under the hips is placed a rubber inflated irrigating pan, with a large efferent tube, to conduct the fluids into a receptacle under the table. These inflated rubber receptacles are a great convenience, preventing all soiling of patient and surgeon, and were first made for me, nearly ten years ago, by the Davidson Rubber Co., of Boston. Somewhat recently, with a slight modification, they have been introduced to the profession as the "Kelly pad." The irrigation with a 1 to 2000 mercuric bichloride solution is under the charge of an assistant, and the entire operation is conducted with due antiseptic care. The sphincter having been stretched and the bowel thoroughly emptied, two fingers in the rectum, the posterior third of the vagina is separated with knife or scissors, from its vulvar attachments. The recto-vaginal space is easily found, without much loss of blood, and the dissection of the vagina from the rectum is carried into the lateral sulci as far as may be judged sufficient. The separated flap is lifted and held by an assistant; then I introduce a large curved needle, the eye near the point, armed with tendon, deeply from side to side; the opposite end is threaded, and the needle withdrawn, carrying the tendon with it. The suturing is continued in this way, until the required number of stitches are taken. This manner of applying the suture, called the shoemaker's stitch, quite unlike any other, I demonstrated at the International Congress in London, in 1881, and so far as I know, its originality has never been questioned.

In rectocele, with prolapse and large, deep sulci, the buried double stitch is taken on either side to join the separated fibres of the levator loop with the retracted transverse perineal muscles, and then are united laterally. Usually, four or five stitches are required to unite the posterior vaginal fascia, and then the separated ends of the



perineal muscles are included by deep sutures. Any needle and stitch may be used, but I prefer the one above mentioned.

In prolapse, where there is great redundancy of the posterior vaginal wall, a portion may be required to be removed, otherwise the edges of the inverted sides are united vertically. I use the buried suture, as described above, in recent cases, and seal with iodoform collodion.

In complete ruptures, after a careful refreshing of the sundered edges with a sharp knife, I split laterally, between the rectum and vagina, quite sufficiently to permit a free separation of the flaps. Over the sphincter, it is usually necessary to carry the dissection in a posterior direction, in order to reach the retracted ends of the sphincter muscle. The lateral dissection must also be sufficiently deep to reach the separated ends of the transverse perineal muscles. To effect this, the posterior third of the torn vagina is usually detached.

If the ends of the retracted perineal muscles seem tense when united, I use the lateral supports, applying one or two pins as heretofore described. These serve simply to retain at rest the coapted parts, and lie parallel to the anus outside the sutures. If the operation is aseptic, the after-treatment is simply rest in bed, and the cure is complete. The operation should be conducted with the strictest care, since it is difficult to operate upon this portion of the body without contamination of the parts involved. The sutures should be applied under irrigation, and the parts about the vulva covered with towels wet in a sublimate solution. Of all surgical procedures, few can be more dangerous than the deep implantation of infection carried by a septic buried suture.

My method differs from others in the following particulars:

1. The dissection of the posterior third of the vagina, not its mucous membrane, from its vulvar attachment, carried as deemed necessary into the recto-vaginal space, and the retention of this flap.

2. In rectocele with prolapse, the closure of the deep layers of post-vaginal fascia by a continuous buried animal suture, taken either single or double stitch.

3. In lifting forward the vagina from its vulvar attachments, the retracted transverse perineal muscles with their connections can be reached and closed also by a deep buried suture, making in this way a true restoration of the pelvic floor.

4. Coapting all superficial surfaces by a buried animal suture, applied in a blind, continuous stitch from side to side, covering the same when dry with iodoform collodion.

5. The application of lateral supports, pins, external to the sutures as a splint, to hold the parts in complete apposition without strain.

6. In complete ruptures, the lateral dissection, the joining of the rectal and vaginal edges with buried sutures, and then finishing the operation as in complete ruptures.

## Philadelphia County Medical Society.

*Stated Meeting, January 23, 1889.*

THE PRESIDENT, W. W. KEEN, M.D., IN  
THE CHAIR.

DR. MORDECAI PRICE read a paper on  
AMPUTATIONS OF THIGH AND LEG.

*(Continued from page 321.)*

DR. H. R. WHARTON: I agree very thoroughly with Dr. Price as to the necessity of securing a good stump, and as to the point of election in amputations through the leg. I have for some time made it a rule not to make any amputation near the ankle-joint, preferring to go some distance above, if I have to go above the ankle.

I, however, disagree with him in regard to the discomfort which a patient suffers with a Syme or a Pirogoff amputation. I have seen such cases get along very well, and walk with comfort. I also disagree with Dr. Price in regard to knee-joint amputations. I, of course, refer to amputation through the joint, the condyles being saved and the patella being left. I have seen these patients apparently walk with comfort, and have a good stump. Where the amputation is one at the knee-joint, a portion of the condyles being sawed off and the patella removed, a square stump is secured which can be well covered. I have seen a number of cases of this operation, and in these the patients had good stumps.

I think that the main element of a good stump is a movable covering, the skin being perfectly movable over the bone. If the skin is bound down and is subjected to pressure, the patient will suffer from constant irritation, and will be apt to exhibit some of the forms of mechanical ulceration seen in stumps.

I agree in regard to the uselessness of trying to save too much time in amputations.

DR. JOHN B. DEEVER: In the large number of amputations I do in the hospitals of Philadelphia, I never do a Syme, but I do a Pirogoff and a Chopart. We often have to be governed by the wishes of the patient. I have had cases where I advised an amputation of the leg in order to render the use of an artificial limb easier, but where the patient has insisted that as much as possible of the limb should be saved. A Pirogoff does well. It answers better for a working man than for one under better circumstances. Osteoplastic resection of the foot gives the patient an almost useless limb. Yet it is a very nice and a very difficult operation. It has been performed only twice in this city, once by Dr. Hopkins, and once by Dr. F. H. Gross, at the German Hospital. The patient of Dr. Gross is still in the hospital. He is able to get around, but I do not think that he will be able to do hard work.

In amputations through the knee-joint I think

In such cases the straight blade speculum must be used. I have, since my last description in the *Medical Register*, devised another nasal speculum or nasal dilator, with which the nasal cavity can be dilated without covering any part of the walls of the inner cavities.

The blades, as shown in Fig. 3, are turned upwards parallel with the handles, thus to enter the extended part of the nose in a vertical position parallel with the face, making no obstruction to the parts where an examination may be necessary.

The operation is so easy and so comfortable that children under 3 years of age undergo examination of the nares without the slightest complaint. The handles of the instrument are all 9 inches in length, while the blades vary in size, as a rule they should go 5 in a set, 3 various sizes where the blades are at an angle, and 2 sizes where the blades are upwards. However, one of each of the middle sizes would be sufficient to the average practitioner.

## FOREIGN CORRESPONDENCE.

### LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

*An English Lady Defends her Thesis before the Paris Faculty—The British Army Medical Department—The Metropolitan Hospital Sunday Fund—Bee-stings in Rheumatism—The Action of Hydrobromate of Ulexine—The British Dental Association—The Children's Fête—Saccharin—The Pasteur Institute.*

Miss Blanche Edwards, daughter of a deceased English doctor settled in Paris, publicly defended her thesis for the degree of Doctor of Medicine a short time ago. The subject she had chosen was "Hemiplegia in Diseases of the Nervous System." As the degree has not been frequently conferred on women by the Paris faculty, a large number of spectators filled the hall. Miss Edwards was congratulated by Professor Charcot, who admitted that she had passed her examinations in a specially brilliant manner, but did not clearly see what return she could expect for her conscientious labors. He asked her what she proposed to do? Her reply was, "I mean to attend all sick persons, but to devote myself specially to women and children." A number of students who occupied the body of the hall expressed their disapproval of the proceedings, but not very noisily.

It is rumored that Sir Thomas Crawford, K.C.B., will be the last chief of the Army Medical Department. This latter will be placed under a Board consisting of two non-medical officers and one medical ditto. It is also stated that some concession will be made to the Army Medical De-

partment in reference to their grievance that they have been lately deprived of relative rank. The majority of the medical officers of the Army are in favor of having military titles, as is the case with the armies of Russia, the United States, etc. So far as personal danger is concerned the Army medical men have of late suffered more than any other branch of the service. It is thought that there is no good reason why a medical officer who is obliged to be in front of the battle and compelled to fight also, should not be called by a purely military title. In the olden days of the British Army it was usual for medical officers to hold commissions as combatants also.

"Sixteen Years of the Metropolitan Hospital Sunday Fund" was the part title of a lecture recently delivered by Sir Sidney Waterlow at St. Bartholomew's Hospital, when the Lord Mayor presided. He said that last year £40,379 had been collected, making a grand total for the sixteen years of £513,962, including legacies. Of this less than tenpence in the pound had been spent in salaries, collecting, distributing and advertising. In the division of the money, 4 per cent. was devoted to the purchase of surgical appliances, which were given away to the poor, then awards to hospitals were based on the average total expenditures of the three previous years, and each hospital was required to send a balance sheet and report for three years, with other details verifying receipts and expenditures. Sir Sidney said there were at present 2,031 beds in seventy-one metropolitan hospitals empty for lack of funds.

Bee-stings are now recommended as a somewhat heroic treatment for rheumatism. It is stated that an average of just 225.4 stings suffice to effect a cure in any one case. The introducer of the bee-sting treatment is evidently almost as ardent an entomological enthusiast as Sir John Lubbock, for he takes great pains to state that bee-stings are not nearly so dangerous as most people imagine, for he has, by way of demonstrating this proposition, given several healthy persons 150 stings apiece in the course of a single day without any ill consequences whatever. Acupuncture has in its day had its supporters, but what, if any, may be the advantages of apiopuncture must be left for time and experience to determine. Whether, however, there are any healthy persons in this country willing to receive in the cause of science some 150 stings *per diem*, or even any rheumatic patients who would like to be cured by 225½ stings, must be left for Dr. F. Tere, the introducer of the new remedy, to find out.

The active principle of gorse (*Ulex Europæa*) has been made the subject of special experiments, the alkaloid used being in the form of hydrobromate of ulexine. When it was applied to frogs this drug, at a certain dose, arrests all voluntary movements and reflexes, due to palsy of the motor

tract of the spinal cord and the motor nerve trunks. The muscles themselves gradually fail but, unless the dose has been very high, are not paralyzed. Respiration is affected and arrested by doses which are not large enough to produce much effect upon the voluntary muscles. The symptoms of this respiratory action come on with irregular breathing, which finally becomes more shallow until death ensues. When the hydrobromate of ulexine is given to one of the higher animals, it produces a rise of arterial pressure which lasts only for a short time, being followed by a fall. It is shown that the depressant action of the drug is its most important feature, for if large doses are used no primary rise, but a steady fall occurs. This fall is evidently due largely to a laming of the heart muscle by the direct action of the drug. The diuretic action of ulexine is very marked, being quite as great as that of caffeine. The opinion entertained is that the action of ulexine and its compounds upon the respiration is of so violent a character that it will be difficult, if not impossible, to make use of this agent in medicine. At any rate, it appears to be one of the most powerful alkaloids ever discovered, and requires the greatest care in manipulating it. Further experiments are now being carried out with the drug by experimenters who think it will eventually take its place as a very useful addition to the pharmacopœia of the future.

The British Dental Association will hold its annual meeting in Brighton on August 22, 23 and 24. The Association is doing much to educate the public on dental questions, and is uniting and consolidating the members of the dental profession. The meeting promises in every way to be a success.

The annual children's fête has recently been held at the Evelina Hospital for sick children. Through the generosity of various friends four large Christmas trees were provided. It may be mentioned that the hospital, of which Baron F. de Rothschild is President, has sixty cots permanently in use, and that in the course of a twelve-month some 500 children pass through the wards. Since the last Christmas fête the floors of all the wards have been relaid with teak according to the practice adopted in the principal general hospitals, and though the nurses past and present have borne the expense so far as one ward is concerned, an additional burden has been cast upon the institution.

The report having gained general currency that the use of saccharin is injurious, the following report has been published by Dr. Thomas Stevenson, official analyst of the Home Office: 1. Saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary. 2. Saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity. 3. His personal ex-

perience is that saccharin may be taken for an extended period without interfering with the digestive and other bodily functions, hence there is no reason to think that its continued use is in any way harmful.

It is reported from Paris that the Pasteur Institute is now complete, and the laboratory appliances of the great bacteriologist are now being transferred to the new and magnificently appointed building. G. O. M.

## MISCELLANY.

DR. WM. G. AUSTIN has been recently appointed resident quarantine physician at Mississippi Station.

DR. HORACE STEVENS, of Cambridge, Mass., died on February 24. He was graduated from the Medical Department of the University of Vermont. He was born in New Hampshire in 1816.

DR. EMANUEL BRAILLER, a prominent physician of Chambersburg, Pa., died on February 6, aged 48 years. He was a member of the American Medical Association, and of the Pennsylvania State Medical Society.

INFECTIOUS DISEASES.—Scarlet fever has been prevailing in Bismarck, Dak., for some time, and all churches, schools, and places of amusement have been closed. Diphtheria has been prevalent in Mechanicsville, Iowa. An outbreak of smallpox has occurred at Carson, Neb. At Belvidere, Ill., the schools have been closed in consequence of the prevalence of measles, varicella, and scarlet fever.

THE AMERICAN ASSOCIATION FOR THE STUDY AND CURE OF INEBRIETY has appointed a committee on "Nostums, Proprietary Medicines, and New Remedies." Dr. N. Roe Bradner, 514 So. Third St., Philadelphia, Pa., is chairman of the committee, and will be glad to hear from any one who has knowledge of nostrums containing opium, alcohol or other poison, or of the evil resulting from their sale. This Association, of which Dr. Joseph Parrish, of Burlington, N. J., is now President, was organized November 30, 1870, the late Williard Parker being the first President, and the first paper, on the "Pathological Influence of Alcohol," was contributed by N. S. Davis, M.D., of Chicago.

A SIMPLE TEST FOR BLOOD, and easy of application, is made by the addition of tincture of guaiac and ozonized ether to a weak solution of blood, when a bright blue color is produced. If a drop of blood be mixed with one-half ounce of distilled water, upon the addition of one or two drops of tincture of guaiac a cloudy precipitate of the resin appears, and the solution has a faint tint. If to this solution one drop of an ethereal solution of hydrogen peroxide is added, a blue tint appears, which, upon a few minutes' exposure, gradually deepens. This test is very valuable for minute quantities of blood, and Dr. Day, of Geelong, succeeded in obtaining sixty impressions from a stain upon cloth where the microscope failed to show any blood.—*Coll. and Clinical Record*.

AT THE COMMENCEMENT EXERCISES of the Meharry Medical Department and the Dental Department of Central Tennessee College, held on February 21, the degree of M.D. was conferred upon 14, and the degree of D.D.S. upon 6 candidates. The Dental Department of this College is the only dental school for Negroes in this country, and the Meharry school is one of the two medical schools for Negroes.

DR. HENRY H. LANGWORTHY, of Rochester, N. Y., died at his residence in that city on February 5. He was graduated from the Geneva Medical College in 1848. He was a prominent member of the New York State Medical Society.

**MEDICAL GRADUATES.**—At the annual Commencement of Rush Medical College, Chicago, held on February 19, 127 candidates were graduated. At the Commencement of the College of Physicians and Surgeons, of Chicago, held on February 26, 48 candidates were graduated.

J. H. PURDY, M.D., formerly of Seneca Falls, N. Y., died recently, of yellow fever, at Panama, where he had gone to practice his profession. He was a graduate of Bellevue Hospital Medical College, in 1869.

**THE FIFTH ANNUAL MEETING** of the Fifth District Branch of the New York State Medical Association will be held in Brooklyn, on Tuesday, May 28, 1889. All Fellows are invited to present papers, communications, relation of cases and specimens at the meeting. All *written* communications presented will be published under the direction of the Executive Committee.

WM. T. LUSK, M.D., President.

E. H. SQUIBB, M.D., Sec'y, P. O. Box 94, Brooklyn.

**INGLUVIN IN THE VOMITING OF PREGNANCY.**—Dr. Popp reports considerable success with ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted all other resources, he administered three times daily, one-half hour before meal-time, 8 grains of ingluvin, and immediately afterward 2 tablespoonfuls of 1 per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and cure was effected after the treatment had been continued for three weeks.—*Deutsche med. Wochenschrift*, January 17, 1889.

#### LETTERS RECEIVED.

A. Kingston, Philadelphia, Pa.; Dr. W. O. Anderson, Eureka, Cal.; Dr. Wm. Boys, Waverley, Ia.; Dr. R. Harvey Reed, Mansfield, O.; Geo. Purviance, Surgeon U. S. M. H., Baltimore, Md.; Dr. J. W. Park, Williamstown, Pa.; W. P. Cleary, New York; Dr. J. M. Bell, Murphy, N. C.; Dr. J. B. Hamilton, Washington, D. C.; Chas. W. Greene, Chicago; Dr. G. H. Randall, Seattle, W. T.; Dr. H. R. Storer, Newport, R. I.; J. H. Bates, New York; Dr. W. H. Forbes, Richmond Hill, N. Y.; J. B. Lippincott Co., Philadelphia; Joseph Bischoff, Elgin, Ill.; Drs. Kent and Morrell, Putnam, Conn.; Jas. S. Kirk & Co., Chicago; Dr. John Phillips, Stevens Point, Wis.; W. H. Schiefel & Co., New York; Dr. A. L. Hummel, Philadelphia; John A. Barrett Battery Co., Baltimore, Md.; Pantagraph Stationery Co., Bloomington, Ill.; Dr. St. v. Martinitz, Cedar Rapids, Ia.; Dr. J. G. Perry, New York; Dr. W. H. Schuyler, Boise Barracks, Idaho; N. W. Ayer & Sons, Philadelphia; Dr. J. W. Leadenham, Franklin, Pa.; National Architects' Union, Philadelphia, Pa.; Price Baking Powder Co., Chicago; Wm. S. Merrell Chemical Co., Cincinnati, O.; Dr. R. J. Duglison, Philadelphia; Woman's Medical College, New York; Dr. Joseph Spiegelhalter, St. Louis, Mo.; Dr. D. T. Brown, Michigan City, Ind.; Philadelphia Polyclinic; Dr. H. T. Bahnson, Salem, N. C.; James F. Starr, Marshall, Tex.; Dr. Chas. N. Hewitt, Red Wing, Minn.; Miss Eliza K. Miles, Thomasville, Pa.; H. W. Young, Independence, Kan.; Dr. C. H. A. Kleinschmidt, Washington, D. C.; Dr. A. W. Strickler, Scottsdale, Pa.; Caxton Agency, Cincinnati, O.; Thos. F. Goode, Buffalo Lithia Springs, Va.; Clark Bell, New York; Dr. J. S. Riggs, Redlands, Cal.; Dr. Wm. R. Finley, Altoona, Pa.; G. G. Burdick, Chicago; I. Haldenstein, New York; Dr. A. B. Storch, Ann Arbor, Mich.; Dr. Wm. A. Campbell, Ann Arbor, Mich.; Dr. J. A. Larabee, Louisville, Ky.; Dr. C. N. Fowler, Youngstown,

O.; Joseph Cummings, D.D., Northwestern University; Wells & Richardson Co., Burlington, Vt.; Dr. E. W. Bartlett, Milwaukee, Wis.; Dr. S. Solis-Cohen, Philadelphia, Pa.; Dr. Henry O. Marcy, Boston; Dr. S. B. Rowe, Rolla, Mo.

#### PAMPHLETS RECEIVED.

Dudley, E. C., M.D., Chicago, Ill. *Pressure Forceps versus the Ligature and the Suture in Vaginal Hysterectomy*. Reprint from Gynecological Transactions.

Jarvis, William Chapman, M.D., New York, N. Y. *Notes on a Case of Nasal Caries Complicated with Meningitis, Successfully Treated by means of the Surgical Drill*. Reprint from the Medical Register.

Mason, Lewis D., M.D., Fort Hamilton, L. I. *Pathological Changes in Chronic Alcoholism*. Reprint from the Brooklyn Medical Journal.

McClellan, Ely, M.D., Chicago, Ill. *Note on Rumbold's Method of Treatment of Catarrhal Inflammation of the Upper Air Passages*. Reprint from the Journal of the American Medical Association.

Weston, Edward B., A.M., M.D., Chicago, Ill. *A New Procedure in Cases of Anticipated Complete Rupture of the Pericrura*.

Weston, Edward B., A.M., M.D., Chicago, Ill. *Cases of Synovitis of the Knee-joint*.

Weston, Edward B., A.M., M.D., Chicago, Ill. *A Plea for the Use of Anæsthetics in Obstetric Practice*.

Wimmer, Sebastian Jr., M.A., M.D., St. Mary's, Pa. *Terebene: Its Medicinal Uses and Value*. Reprint from the New York Medical Journal.

Wyman, Hal C., M.S., M.D., Detroit, Mich. *The Training of Nurses*. Reprint from the Medical Register.

Eccles, R. G., M.D., Brooklyn, N. Y. *Descent and Disease*. Reprint from the Brooklyn Medical Journal.

Nelson, Wolford, C. M., M.D., New York, N. Y. *Yellow Fever, Absolute Protection Secured by Scientific Quarantine*.

Parrish, Joseph, M.D., Burlington, N. J. *Climate and Malaria*. Reprint from the Official Transactions of the Ninth International Medical Congress.

Van Bibber, W. C., A.M., M.D., Baltimore, Md. *Prevention of Yellow Fever in Florida and the South*.

*Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 23, 1889, to March 1, 1889.*

Lieut.-Col. James C. McKee, Surgeon U. S. Army, is granted leave of absence for two months, by direction of the Secretary of War. Par. 13, S. O. 44, A. G. O., Washington, February 24, 1889.

Major Charles R. Greenleaf, Surgeon, will proceed from this city as early as practicable to Newport Bks., Ky., to examine and report upon a proposed change in the location of the post hospital at the new barracks now in process of construction near that post; thence to Columbus Bks., O., to examine and report upon the necessity for an addition to the hospital at that post. Par. 16, S. O. 43, A. G. O., Washington, February 20, 1889.

Capt. Charles B. Byrne, Asst. Surgeon, granted leave of absence for twenty-one days. S. O. 44, Hdqrs. Div. of the Atlantic, Governor's Island, New York City, February 21, 1889.

By direction of the Secretary of War, Capt. William O. Owen, Jr., Asst. Surgeon, is relieved from duty at Ft. Leavenworth, Kan., and will report in person to the commanding officer, Ft. Gibson, Indian Ter., for duty at that post, relieving Capt. C. N. B. Macaulay, Asst. Surgeon, who, on being so relieved, will report in person to the commanding officer, Ft. Leavenworth, Kan., for duty at that post. Par. 3, S. O. 48, A. G. O., February 21, 1889.

THE

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## ORIGINAL ARTICLES.

### DOUBLE UTERUS AND VAGINA.

BY L. H. DUNNING, M.D.,  
OF SOUTH BEND, IND.

In a previous paper the writer presented a summary of facts and conclusions arrived at after studying the histories of 97 cases of malformation of the uterus and vagina due to defective development of the ducts of Müller. He has since collected and tabulated the histories of 224 more cases, all obtained from what he believes to be reliable sources. These, together with the 97 reported in the former article, comprise all the cases, except a very few not at the time obtainable, to be found in the library of the Surgeon-General's office at Washington, and the writer thinks will furnish us data for arriving at correct conclusions.

The tables were originally designed for publication, but are found too voluminous; but as they contain many points of interest to the general practitioner, and some of them are at variance with statements made by writers of acknowledged authority, the writer has thought a summary of some of the facts obtained might be of value to the profession. The tables just referred to are made up from reports of 224 cases and are four in number. Number 1 is a record of 100 cases of congenital malformation of the uterus in which pregnancy occurred. In twenty-nine of the cases the vagina was double.

Table No. 2 records 20 cases in which pregnancy occurred in women having double vaginae while the uteri were of normal development.

Table No. 3 relates to malformations of the uterus where pregnancy never occurred. There are 90 cases recorded thirty-five of which are associated with double vagina. Lastly table No. 4 is a record of 12 cases of non-pregnant normal uteri each one associated with a double vagina. In this paper, chiefly for the writers convenience, he will follow the line of study indicated by these tables.

The term double uterus, as in the former paper, is used to include all congenital malformations of the uterus described by Todd<sup>1</sup> as uterus

bipartitus, uterus unicornis, uterus bicornis, and uterus bilocularis. By accepting the anatomical description of this author all the various subdivisions may be easily included as these of our general classes.

The comprehensive term, double vagina, is intended to include all vaginae divided into two parts by an antero-posterior septum, whether complete or incomplete, whether the vaginae are of equal or unequal size, or one patulous and the other occluded.

Double vagina has heretofore received little consideration. It is hardly of less importance clinically than double uterus, and then the malformations of the uterus under discussion are more frequently associated with a double than a single vagina. Of the 270<sup>2</sup> cases the writer has studied, 144 or 53 $\frac{1}{8}$  per cent. were associated with a duplex condition of the vagina, and furthermore, this duplex condition of the vagina sometimes gives rise to many distressing symptoms and in a few cases has been the cause of the death of the patient. Frequently it has interfered with coition, menstruation and labor so that operative procedures have been required.

The writer has purposely abstained from theoretical discussions, leaving that for some future occasion, and has confined himself to the historical, clinical and statistical study of the subject.

First, then following the line of study as indicated in his description of the tables above, he has to present some facts relative to 100 cases of pregnancy, gestation, and delivery. Tables A, B and C are sufficiently plain as to require no explanations.

The following facts regarding twin and triplet pregnancies are found, viz.: Fifteen women were pregnant of twins seventeen times. The forms of the uteri were as follows: Bicornis, vagina single, 10 women pregnant 11 times; bicornis, vagina double, 2 women pregnant 2 times; bilocularis, vagina single, 3 women pregnant 4 times.

One woman four twins twice and triplets twice. This woman had a bicornute uterus with double vagina, and died of rupture of the uterus in the last labor.

It is pertinent to enquire what are the dangers

<sup>1</sup>Todd's Cyclopædia of Anatomy and Physiology, Vol. v, p. 678.  
<sup>2</sup>Cases in the former article included.

TABLE A—*Showing facts regarding pregnancy in the different forms of double uterus and vagina.*

FORM OF MALFORMATION.	No. women pregnant.	No. pregnancies.	No. Natural deliveries.	No. artificial deliveries.	No. not stated.	Abortions or miscarriages.	No. of deaths of mothers.	REMARKS.
Uterus double, vagina single.	71	161	122, or 75.5 %	22, or 13.6 %	3	22, or 13.6 %	20, or 23.1 %	
Uterus double, vagina double.	29	85	36, or 40 %	17, or 26 %	22	10, or 16 %	8, or 27.5 %	
Uterus bipartitus, vagina single.	3	7	4	2	..	1	1, or 33 1/3 %	
Uterus bipartitus, vagina double.	1	1	1	..	..	..	..	
Uterus unicornis, vagina single.	3	6	4	..	..	..	3, or 100 %	
Uterus bicornis, vagina single.	42	120	80	11	4	23	11, or 26.1 %	26 women had natural deliveries, 10 women had artificial deliveries, 1 missed labor, 10 women miscarried. Number of women who miscarried, 8.
Uterus bicornis, vagina double.	19	50	24	10	1	13	6, or 31.5 %	
Uterus didelphys.	4	4	..	2	..	2	..	These cases were included in the class immediately above.
Uterus bilocularis, vagina single.	18	39	34	4	..	..	5, or 27.6 %	Number of women having natural deliveries, 14.
Uterus bilocularis, vagina double.	8	19	14	3	..	1	2, or 25 %	Number of women having natural deliveries, 3; pregnant when seen, 1.

TABLE B—*Showing the number of deaths, and the cause thereof, as a result of pregnancy and delivery in double uterus and vagina.*

FORM OF MALFORMATION.	No. of Deaths.	Sepicemia.	Puerperal Fever.	Peritonitis.	Hæmorrhage, Post-partum.	Hæmorrhage from vicious resection of the Placenta.	Collapse.	Hæmor. Placenta-previa.	Rupture of the Uterus.	REMARKS.
Uterus bipartitus, vagina single.	1	..	..	..	..	..	..	..	1	
Uterus unicornis, vagina single.	3	..	..	1	..	..	..	..	2	The death from peritonitis followed a normal delivery.
Uterus bicornis, vagina single.	11	..	1	1	1	..	..	..	4	Puerperal endometritis, 1; pneumonia, 1; eclampsia, 1; arterial embolism, 1.
Uterus bicornis, vagina double.	6	1	..	2	..	..	1	..	..	Rupture splenic abscess, 1; not stated, 1.
Uterus bilocularis, vagina single.	5	..	..	..	1	1	..	1	1	1 from metro-peritonitis, and 1 polypus of the heart.
Uterus bilocularis, vagina double.	2	..	..	1	..	..	..	..	..	1, eclampsia during labor.

TABLE C—*Showing the means employed to effect delivery where artificial means were employed.*

FORM OF MALFORMATION.	Number of Cases.	Forceps.	Turning.	Laparotomy.	Cæsarean Section.	Incision of Septum.	Cephalotripter.	Manual Delivery.	REMARKS.
Uterus bipartitus, vagina single.	2	2	..	..	..	..	..	..	
Uterus bicornis, vagina single.	11	4	2	1	..	..	..	..	Fœtus removed piecemeal, 1; not stated, 3.
Uterus bicornis, vagina double.	10	1	2	..	..	..	1	1	Fœtus removed piecemeal, 1; accouchement force, 1; not stated, 3.
Uterus bilocularis, vagina single.	4	1	1	..	1	..	..	..	Croche, 1; 1 on account of abnormal position of uterus.
Uterus bilocularis, vagina double.	3	..	..	..	1	2	..	..	Cæsarean section was done after death of mother from eclampsia.

to be feared from pregnancy occurring in those forms of malformation of the uterus? In the first two forms, viz.: bipartitus and unicornis, rupture of the uterus. In the first on account of the defective development of uterine tissue, its walls may not develop as the period of gestation advances. They are prone rather to dilate as the embryo grows and finally reach a point where they are not sufficiently strong to resist the pressure from within and rupture. In the second form we have three elements of danger either one of which may lead to rupture of the uterus.

1. The rudimentary horn may become pregnant and rupture from the same cause as mentioned in the preceding paragraph, or the fœtus attaining full growth may find no way of escape



from the uterus and a rupture of the organ occur as a result of labor-pains.

2. The unsymmetrical development of the uterine corna predisposes it to rupture sometime during the period of gestation or in labor.

3. The oblique position in the pelvis in which the horn develops may remove the axis of the uterus from that of the vagina and thus render labor not only difficult but natural labor impossible, and here rupture may result from long continued pressure of some portion of the foetus upon the uterine wall conjoined with the violent contractions of the uterus in its efforts to effect delivery. The last mentioned element of danger is probably more theoretical than real, for the writer has been unable to find any reported cure of rupture of the single horned uterus where the pregnancy occurred in the developed horn, while he has the histories of two cases where rupture resulted from impregnation of the rudimentary horn.

In uterus bicornis troubles following delivery are the most prolific causes of the death of the mother. - This may be accounted as due to the large number of difficult labors and the imperfect drainage of the uterus following labor on account of its unfavorable position in the pelvis. Rupture of the uterus is next in frequency as a cause of death. One case occurred because of the impaction of the head of the foetus and the prolonged effort of nature to expel it, and in three cases where each foetus developed in a rudimentary horn.

Hæmorrhage was the chief cause of death in patients having uterus bilocularis. Vicious attachment of the placenta and irregular uterine contractions subsequent to labor are mentioned as the predisposing causes of the hæmorrhage.

As a second division of our subject we may consider those cases having a vaginal septum with the uterus normal and all the subjects pregnant. Here we have the histories of 22 cases. The vaginal septa presented various forms and shapes and are described by reporters as crescentic, pyramidal and complete antero-posterior vertical septa. When complete they extend from the introitus vaginae to the cervix uteri or to the upper extremity of the vaginal tube to one side of the cervix. The septum is covered by mucous membrane upon either side and continuous with the mucous membrane of the vagina. Between the two layers of mucous membrane are submucous and cellular tissue, the latter of which serves to fasten it in its position antero-posteriorly in the vagina. Considerable muscular tissue is sometimes present between the layers of mucous membrane, and at times fibrous tissue predominates. Any part of the septum from the vaginal entrance to the cervix of the uterus may be deficient, so that the forms and shapes already mentioned may be assumed. In this class we have twenty-two

women pregnant twenty-eight times. One woman was pregnant several times, with every labor normal. The septum interfered with labor in 12 instances. Of these the septum was torn through in labor in 4, incised in 7, and severed by a thread in 1. In 3 cases considerable hæmorrhage followed the incision. There were no deaths. Seven patients had normal deliveries. In the artificial deliveries the following means were used, viz.: Crochet, 1; delivered through the rectum after incision, 1; forceps, 4; and manual change of position of the child in 1 case.

Our third division relates to congenital malformations of the uterus where the vagina is single or double and pregnancy has never occurred. Here we have the histories of 90 cases. The chief interest the writer has found in the study of this class of cases has been in the percentage of each form of malformation found, the departures from the normal in the anatomical condition, the anomalies of menstruation incident to them, and lastly, the diseased conditions found to exist. There were of the various forms reported: Of uterus bipartitus, vagina single, 7 cases, vagina double, 1 case; of uterus unicornis, vagina single, 11 cases, vagina double, no case; of uterus bicornis, vagina single, 32 cases, vagina double, 28 cases; of uterus bilocularis, vagina single, 5 cases, vagina double, 6 cases. Total—vagina single, 55 cases; vagina double, 35 cases. In uterus bipartitus the vagina was found to be normal in but a single case and double in one. In all others it was either short, a cul-de-sac, or entirely absent. The adnexa were found normal in 3 cases, and either rudimentary or imperfectly developed in others. The uteri varied in size, shape and development. In some cases they were simply rudimentary without a canal, in others without any communication with the ovaries through the Fallopian tubes. In one case the uterus was sufficiently well developed to admit of normal menstruation, and in this instance the reporter states there were three ora, and that the menstrual fluid escaped from all of them simultaneously.

Concomitant to an imperfectly developed condition of the uterus and vagina was a like condition of the adnexa. Sometimes the imperfections were found in the tubes and at other times in the ovaries. The anomalies of menstruation were dependent upon those of the organs already described. The nearer approach to perfect development of all the organs involved the more nearly normal was the performance of the function. Menstruation was absent in three cases, vicarious in one where there was no uterine mucosa, but normal tubes and ovaries. In one in which there was no normal flow, but distressing molimina, the latter entirely disappeared on removal of the ovaries.

There does not seem to have been any record of a special proneness to any one disease.

In uterus unicornis we find no instances where

this malformation was associated with a double vagina. The most marked feature to be found in this class is an occasional rudimentary horn, also a rudimentary condition of the tube and ovary upon the side in which the cornus is absent. A number of cases of entire absence of the tube, ovary and kidney upon the imperfect side are found. A marked deflection of the one-horned uterus toward the side in which it develops frequently exists. But few details are given respecting menstruation, but what are, show that this important function is performed irregularly or is entirely absent.

Of the 90 cases of women who have never conceived and who had malformations of the uterus of the forms under discussion, 60 of them were of uterus bicornis. Here is the middle ground between the normal and the greatest deviation from the normal, and here will centre the chief interest of the practitioner. In the 28 cases in which the duplex vagina occurs will be found nearly every variation incident to this anatomical abnormality. In some instances the vagina is divided into two parts, equal or unequal, by a complete septum. Atresia of one side occurs in one instance, and in several instances a partial septum incompletely divides the tube.

There are 15 instances of complete septum and 4 in which it is incomplete, 1 of atresia of one vagina, and 8 in which it is not stated, but is probably complete. As great a variation in the form of the uterus was noted. Todd's accuracy in his description of this form of malformation is here verified. No cases of uterus didelphys are recorded in this table. The histories from which the table was compiled are too meagre, in some instances, to enable the compiler to accurately state the number in each variety in this class; nor, indeed, is it important.

It was observed that sometimes the os was single and sometimes double, and that in quite a number of instances there was atresia of one os and a resultant hæmatometra. A rudimentary horn was not infrequently present, and when found it had usually as concomitant a rudimentary ovary and tube. The facts regarding menstruation are not sufficiently complete to be entirely satisfactory, yet there are some points of interest. Sometimes the flow proceeds from both sides of the bicornute uterus simultaneously, and at other times the uteri alternate in the performance of this function; when they do menstruation occurs either every two weeks or every four weeks. In the light of these facts who can question the possibility of the impregnation of one horn when the other horn contains an ovum in process of development.

Hæmatometra is met with more frequently in this class than in all others. Cystic degeneration of the ovary seems to be the only disease which occurs with more than usual frequency.

In uterus bilocularis there is the least departure from the normal development. The adnexa are less frequently rudimentary or absent, the external genitals more frequently well developed and the performance of the menstrual function is not so often imperfect or difficult.

There are recorded in this table 6 cases in which in this class the vagina is duplex. In all of them the septum was complete and no instance of atresia of any one of them found. There are 6 cases in which there are two ora, 3 having two cervices, 2 of single os, 1 of atresia of the os, and 2 not stated. One case had two cervices and a single os. Here a hæmatometra developed. There is quite a variation in the external form of the uterus. Sometimes no departure from the normal could be detected in the body of the uterus by conjoined manipulation, in others a groove marked the line of division of the organ, and in others there was a depression at the center of the fundus. The vaginal touch and uterine sound proved the most valuable means of diagnosis.

In but four instances are there details given of the state of the menstrual function. In three of these it was performed normally, and in one normally, except that it was painful. The following morbid conditions were found: 1 of cyst of Fallopian tube; 1 gonorrhœa with resulting parametritis; 1 cancer of the uterus.

The fourth table I have compiled and to which I wish to refer to here, is made up of the histories of 12 cases of non-pregnant normal uteri associated with double vagina. One vagina was a cul-de-sac in seven instances. Inflammatory disorders of the uterus and vagina existed in six instances. The septum was incised in three, and severed by the galvano-cautery in two, and all recovered. Disordered menstruation was present in 3 cases. The uterus was normal in all cases but one and in that one it was undeveloped.

The following is a statement of the number and per cent. in each form of malformation, including those reported in my former paper, viz.: Uterus bipartitus, 14 cases, or 5.2 per cent. of all cases; uterus unicornis, 18 cases, or 6.7 per cent. of all cases; uterus bicornis, 175 cases, or 65.3 per cent. of all cases; uterus bilocularis, 68 cases, or 22.7 per cent. of all cases; unclassified, 2 cases. Total number of cases 270. Number of cases of double uterus and vagina, 144, or 47.3 per cent.; number of cases of double uterus, 126, or 41.4 per cent.; number of cases of double vagina, 34, or 11.1 per cent. Total number of cases, 304.

*Hæmatometra.*—Twenty cases in all are recorded in the lists we are studying. One was found two weeks after delivery and 19 in cases in which pregnancy never occurred. In but a single instance do we find it associated with hæmatocolpus. In one instance nature after a time performed a cure, a perforation occurring in the septum between the cornua so that the retained fluid escaped

into the pervious uterus and thence found its way into the vagina. A perfect recovery took place.

No instances are recorded where hæmatometra or hæmatocolpus was discovered where there was double vagina alone, and but a single case occurred in a woman who had ever been pregnant. This woman had borne twelve children, the last one three weeks before admission into the hospital. Upon examination a hæmatometra was discovered, opened by the finger-nail and the patient recovered. One case of rupture of the uterus is recorded, resulting from hæmatometra. A hæmatometra had been discovered and punctured and part of the fluid evacuated. Five days later the patient died suddenly of rupture of the uterus. Of the cases of hæmatometra recorded 19 were of uterus unicornis, and 1 of uterus bilocularis. Seventeen of them were operated upon, 9 died and 8 recovered. The means employed, and results, are as follows: 6 cases of puncture with trocar, 5 deaths, 1 recovery; 2 cases trocar first and bistoury later, 1 recovery and 1 death; 5 cases incision with bistoury, 4 recoveries and 1 death; 1 opened with finger-nail, recovered; 1 opened with sound, died; 2, means not stated, 1 died, 1 probably recovered; 1 case nature cured. The causes of death in 6 cases is states as peritonitis; 1 empyæmia; and 2 not stated. In one case imperfect drainage resulted in suppuration, free drainage and irrigation effected a cure. In another puncture was followed by fever, which was quickly relieved by free incision.

Hæmatocolpus is found in three instances, once occurring with hæmatometra, the details of which I am unable to obtain. A second one is found with no details. The third case was one of acquired hæmatocolpus. It was tapped four times. After the last tapping a peritonitis developed and the patient died.

*Rupture of the Uterus.*—Nine cases of rupture of the uterus are recorded. Six were of uterus bicornis, two of uterus unicornis, and one of uterus bipartitus. All but one occurred as a result of pregnancy. The exceptional case was one of uterus bicornis, in which there was atresia of one horn and a hæmatometra developed. It was punctured and the menstrual fluid allowed to escape. Five days later the patient was suddenly seized of a violent pain, which lasted some time, when she had the feeling as of something giving way. Death soon followed and the autopsy revealed a rupture of the uterus of the horn in which the menstrual fluid had been retained.

Of the 8 cases pregnant in which rupture occurred, in 3 it was the first pregnancy; in 1 the twelfth pregnancy; but the first in the horn ruptured one previously referred to; 1 in the fifth pregnancy and first in the horn ruptured; 1 in the fourth pregnancy and first in the horn ruptured; 1 not stated; 1 in the fifth pregnancy, that of triplets.

In the last case the rupture occurred in the forty-first hour of labor, all the preceding labors having been difficult. The rupture in this case was doubtless due to the head having been in such a position that it could not advance.

The immediate cause of death was peritonitis in 4 cases; hæmorrhage in 3; not stated in 2.

No operative measures were employed in 6 cases. In 2 the children were delivered by forceps. Every patient in which the rupture occurred died. No operative procedures were resorted to to save the patients after the rupture occurred.

The records show a case in which laparotomy was done to remove a supposed tumor. A pregnant rudimentary horn was found. A month later the abdomen was opened, the horn extirpated and the patient made a good recovery. In another instance pregnancy occurred in a rudimentary horn, symptoms of labor appeared and passed away. Six months later the woman died of phthisis, when autopsy revealed the true condition. The fœtus had been dead some time and was partly absorbed.

These two cases furnish us a hint of the possibilities of cure in laparotomy, and in electricity to produce death of the fœtus. It is not surprising that the expectant treatment was adopted in the majority of the cases of rupture; for they occurred before the benefits of laparotomy were fully understood, and some of them, indeed, before this procedure had ever been employed for the relief of similar conditions. Then, too, it must be remembered, the true nature of some of the cases was only determined upon autopsy. The question will naturally arise as to the operative measures to be adopted when a pregnant rudimentary horn is discovered. The solution of this question will doubtless depend upon the anatomical condition present and the time in the period of gestation it is found. If the examiner can make out clearly a pregnant rudimentary horn with a long pedicle, and in the early months, laparotomy will doubtless be generally chosen. Should the rudimentary uterus be closely attached to its fellow then it may be necessary for the operator to choose between Porro's operation and the use of electricity to produce the death of the fœtus.

The highly favorable results shown by recent writers attending the use of electricity will strongly tend to popularize the procedure if indeed not to stamp it as the one above all others to be employed in all cases of pregnancy of the rudimentary horn and of extra-uterine pregnancy in the earlier and middle months. After the rupture of the uterus and the discharge of its contents into the abdominal cavity laparotomy affords the only hope of recovery. When the full period of gestation is reached without a rupture, and labor is attempted, the same rules must govern the treatment as in tubular pregnancy, and when rupture occurs during labor from obliquity of the uterus,

impaction of the foetal head, or from non-development of some portion of the uterus, and the os be pervious and in communication with the vagina, the same procedures should be adopted as in rupture of the uterus occurring where there is no malformation. Simon's case<sup>1</sup> shows one point of particular interest. A rudimentary uterus having no communication with its fellow became pregnant and ruptured. The autopsy revealed an absence of a corpus luteum in the ovary corresponding to the pregnant horn, but a fresh one in the ovary of the opposite side. This instance strongly supports the theory of the migration of the ovum, either before or after it has been pierced by the spermatozoa, to the mouth of the tube upon the opposite side and thence through the tube to the rudimentary horn.

of such associated maladies together with the polypi is the "key-note" to the proper and effective handling of the patient. Recognition of the exact points of origin of the neoplasms is essential to a clear understanding of their etiology and treatment. The outer wall of each nasal cavity is rendered especially uneven by the three turbinated bones, their margins of attachment being horizontal one above the other, which leaves intervening spaces, called respectively, the inferior meatus, between the inferior turbinated body and the nasal floor, the *middle meatus*, between the middle and inferior turbinated bodies and the superior meatus, between the superior and middle turbinated bodies. In the outer wall of the middle meatus is the ethmoidal fissure or *hiatus semilunaris*—a crescentic opening about two millimetres in width and two centimetres in length, its

### NASAL MYXOMATA.

*Read before the Chicago Medical Society, September, 1888.*

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Nasal polypus is an ancient subject, but considering its frequency, the discomforts and dangers to which it subjects the sufferer, the difficulty

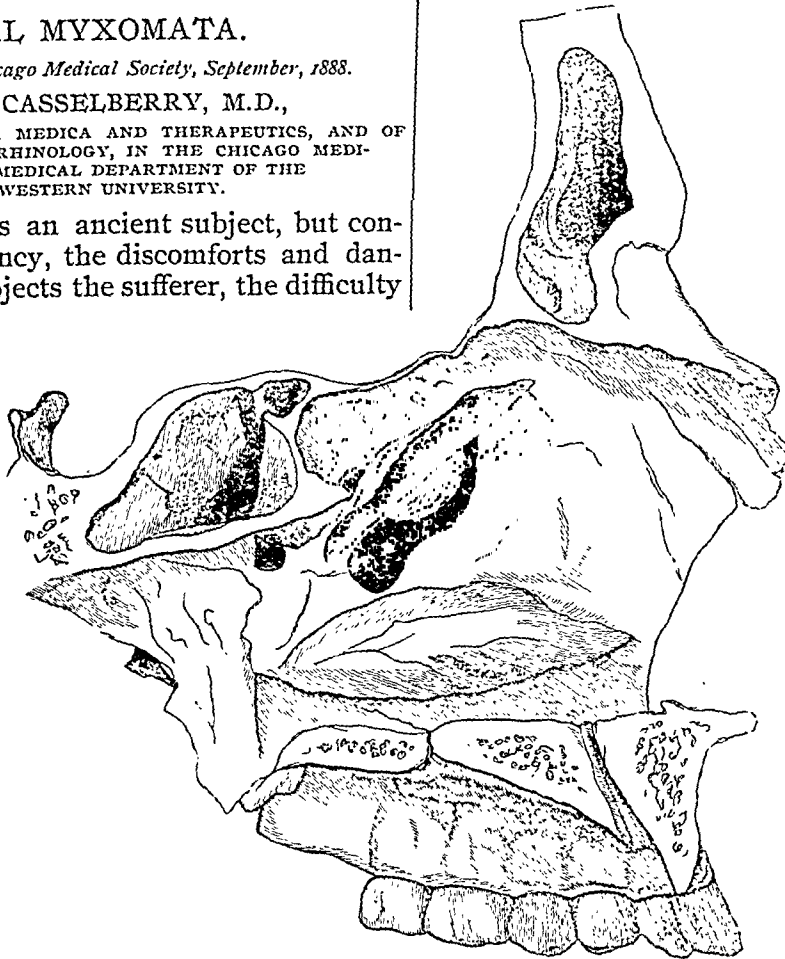


Fig. 1.—Representing the outer wall of the left naris with the middle turbinated body turned upward to show beneath the hiatus semilunaris, to the edges of which polyps are frequently attached.

of radical extirpation and the consequent liability to recurrence, it may well be reviewed in the light of modern methods.

The disease does not exist as a primary affection, but is always associated with some other nasal malady which stands to it in the relation of cause or as a complication. Indeed the removal

convexity being directed downward and forward. (Figure 1.) The antero-inferior boundary of the fissure is a sharp edged ridge which, from its hook-like curve, is termed the unciform process of the ethmoid bone. The postero-superior boundary is formed chiefly by the *bulla ethmoidalis* which is an ethmoidal cell with its wall bulged toward the septum and downward. The

fissure itself is an opening into the whole length of the side of the *infundibulum*, which is an elongated crescentically curved funnel shaped cavity communicating through its upper and smaller end with the frontal sinus and through its lower and larger extremity with the antrum of Highmore, entering this cavity in conjunction with the main opening into it from the middle meatus—the *ostium maxillare*.

Above the bulla ethmoidalis, between it and the top of the middle turbinated bone, is another, smaller, fissure which leads into the ethmoid cell of the bulla.

All of these parts lie high up, beneath the middle turbinated bone which hangs down over them like a curtain.

Well developed myxomata rarely spring from flat surfaces. They arise wherever there is a free edge covered by mucous membrane whence they hang by a pedicle. Zuckerkandl (*Anatomie der Nasenhöhle* S. 64 *et seq.*), cited by Mackenzie,<sup>1</sup> has furnished the most definite information of the exact points of origin of nasal myxomata in the publication of the post-mortem observation of forty-two distinct growths in which the deep origin was ascertained by the gradual removal of the bony parts. Of these forty-two growths, twenty-nine grew from the middle meatus, including two from within the *infundibulum*, four from the middle turbinated body, three from the superior meatus and the balance of six scattering as, from the Antrum of Highmore two, *ostium frontale* one, *ostium sphenoidale* one, *ostium ethmoidale* one, and upper tubinated body one.

Of the twenty-nine growing from the middle meatus, seventeen were attached to the edges of the *hiatus semilunaris*, the crescentic fissure just described. These observations are in perfect accord with the precise clinical observations recently rendered possible through the extension of our field of vision within the nasal fossæ by the retracting power of cocaine.

It is thus shown that *two-thirds* of all nasal myxomata originate from the middle meatus, beneath the middle turbinated body, and that approximately *two-thirds* of this number take origin from the edges of the *hiatus semilunaris*.

With this knowledge and judging from the superficial position of the neoplasm and the direction of its pedicle toward attachment we can be reasonably certain of the deep point of origin even when such is not visible and can often destroy the very root of the growth by insinuating a properly curved cautery point-electrode to the spot.

The attachment, wherever located, may involve only the mucous and submucous tissue, or it may extend too and involve the underlying bone. The nasal mucous membrane consists of two layers: a superficial mucous stratum, and a

deep fibrous layer, which latter has the position and functions of periosteum or perichondrium. As first asserted by Stoerk<sup>2</sup> mucous polypi or myxomata, which are connective tissue growths, arise chiefly from the mucosa or superficial layer included with which is a connective tissue submucosa, but in parts of the upper or olfactory tract the mucous and fibrous (periosteal) strata are closely adherent and it is easy to conceive of the attachment penetrating subsequently to the immediately adjoining periosteum (fibrous layer) and thence to the bone.

Furthermore, it is asserted by Woakes<sup>3</sup> that "these two layers constitute a muco-periosteum which unseparated, dips into the spongy structure of the bone and lines the cells and their osseous dissepiments." In this way the mucous membrane element is introduced into the very interior of the bone and hence may arise myxomata from within the cancelli of the bone of course having bony attachments. Being connective tissue growths it is entirely possible also they may at times originate directly from the periosteum without the intervention of the mucosa although a fibroma or at least a fibromyxoma is more likely then to result.

*Etiology.*—The most common complication acting also in a causal relation to nasal polypus is hypertrophic rhinitis. Hyperæmia and all which tends to cause congestion will excite hyperplasia and predispose to the formation of distinct neoplasms. Various factors may influence the perversion of a simple hyperplasia of the mucous elements into myxomatous formations.

Hereditary or constitutional diathesis, of a nature too subtle for positive demonstration, may predispose certain families or certain members of a family, as is the case with other neoplasms. It is probable, however, that more frequently variations in the physical conformations of the nostrils determine the involvement of particular areas in the hypertrophic process which occurring at these points is prone to assume the myxomatous form.

On flat surfaces, *e. g.*, the inferior turbinated body, true polypi rarely develop, but sessile polypoid excrescences—minute myxomatous neoplasms, called "polyp-buds," are a common perversion of the hypertrophic process in this locality. These show little disposition to become fully developed polypi. But when hyperplasia occurs upon a free edge whence portions of mucous membrane become pendulous the conditions are favorable to the production of a circumscribed oedema. The pendulous position with gravity simply favors the exudation of a maximum of mucin containing serum with a minimum of connective tissue cell proliferation. Consequently whatever favors hypertrophy over such free edges, as the borders of the *hiatus semilunaris*, middle turbinated

<sup>1</sup>Diseases of the Throat and Nose, Vol. ii, p. 362.

<sup>2</sup>Die Krankheiten der Nase, 1830, S. 99.

<sup>3</sup>Nasal Polypus, etc., in relation to Ethmoiditis, 1887, p. 6.

body, etc., acts as a direct cause of mucous polypus. This area is less frequently involved in the hypertrophic process than the lower turbinated bodies, but the same causes, *e. g.*, repeated, acute rhinitis, dust or vapor irritants may affect it either directly or through extension by continuity of surface.

*Stenosis, whether induced by hypertrophy of the inferior turbinated bodies, septal deflections or excrescences, results in defective drainage. Mucopurulent secretion, imprisoned and decomposing in the middle meatus and around the middle turbinated body, excites irritation and furnishes the most favorable soil for polyp growth.*

Very narrow nostrils, because more readily stenosed, are predisposed, in this manner, to myxomata, and peculiar curvatures or deformities of the septum and middle turbinated bodies by obstructing drainage have a like effect. In one instance, a congenitally deformed middle turbinated bone encroached tightly upon the septum and even pushed it far to the opposite side, preventing drainage from above and causing irritation of surrounding parts.

The influence of hypertrophic rhinitis on the etiology and treatment is well illustrated in the following history.

Miss T—, *æt.* 10 years. Total obstruction of the left nostril of one year's duration.

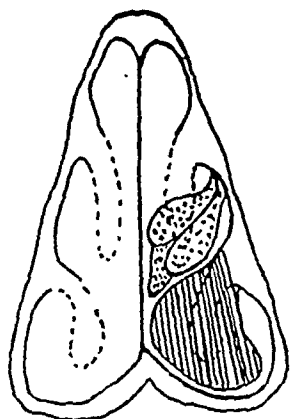


Fig. 2.

*Status Præsens.*—Examination July 16, 1887. Enormous hypertrophy of the inferior turbinated bodies. Numerous polypi are closely impacted between the turbinated bodies and the septum they proceed from the middle meatus and are continuously imbedded in a mass of thick viscid mucopurulent secretion. (Figures 2 and 3.) The polypi seemed secondary to the hypertrophic rhinitis and defective drainage. On the right side hypertrophy was present but was insufficient to obstruct the drainage and no polypi were visible.

Operations first by the cold wire snare resulted in the removal of numerous growths, during re-

peated sittings, but without improvement. The polypi developed as rapidly as removed, springing up like mushrooms in the soggy soil, maintained by the imprisoned secretions. The inferior turbinated body was next cauterized along its entire extent being reduced in front where it especially interfered with vision, instrumental passage and drainage, almost to a rudiment. One

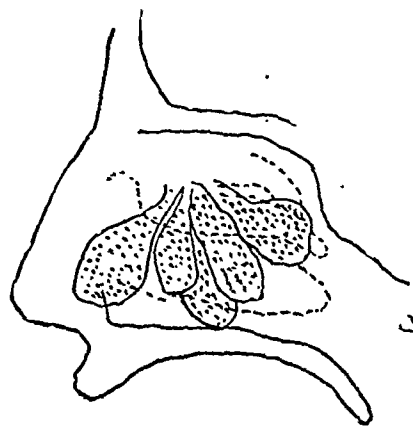


Fig. 3.

was enabled then to trace the tumors to their exact seat of attachment in the immediate vicinity of the *hiatus semilunaris* and to thoroughly eradicate them by reaching that position with a cautery point. No recurrence. Cure complete.

This patient was but 10 years of age. Myxomata are said to be rare before puberty but are probably only relatively as rare as persistent rhinitis at the same period.

Again, Mr. P—, *æt.*, 45, catarrhal symptoms

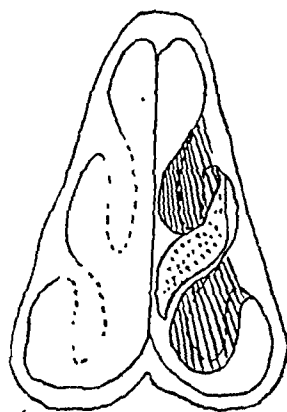


Fig. 4.

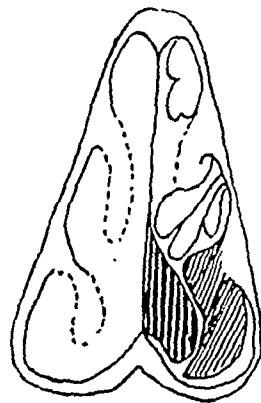


Fig. 5.

for some years; obstruction of the left nostril for one year.

*Status Præsens.*—Examination March 18, 1887. A single polypus proceeds from the left middle meatus and is traceable in the direction of the *hiatus semilunaris* to the edge of which it is evidently attached. (Figure 4.) The middle turbinated body is so hypertrophied as to reach across



to the septum and to obstruct drainage from the middle meatus even after removal of the polypus.

The myxoma was removed by the cold wire snare and its base cauterized by the insertion of a flat knife-electrode upward beneath the middle turbinated body to the point of attachment. Subsequent reduction of the hypertrophic rhinitis and the establishment of proper drainage. No recurrence.

The case of Mr. M—, æt. 25 years, referred by Dr. N. S. Davis, Jr., is remarkable on account of the multiplicity of the neoplasms and the gravity of the consequences.

Both nasal fossæ were literally packed with myxomata and fibro-myxomata. Complete suspension of nasal respiration for years; stupidity of facial expression incident to mouth-breathing; pharyngitis and predisposition to acute bronchitis and asthmatic paroxysms; total incapacity for business usefulness. Previous courses of treatment had failed.

After removal, one by one, of a number of polypi, the inferior turbinated bodies were found to be greatly hypertrophied. They obstructed respiration and drainage, interfered with the transmission of light to the superior and posterior parts of the fossæ and prevented the passage of instruments.

After reduction of these bodies by the galvano-cautery snare and knife electrodes it was possible by the same means to extirpate the bases of the numerous myxomata, which originated from the middle meatus, middle turbinated body, and from the superior meatus descending posteriorly. Result perfect. Examination after one year shows not the slightest recurrence, and nasal respiration is always free.

Septal excrescence is another complication acting also in a causal relation to nasal myxomata. These deformities of the septum are usually found on the sutural lines of the component bones and cartilages, and are osseous or osseo-cartilaginous in structure. The most frequent location is the sutural line of the vomer, and superior maxilla and cartilaginous septum just within the anterior nares and close to the floor of the nose. This, as well as other conditions, finds illustration in the following case.

Mr. B., æt. 32 years, has suffered from nasal obstruction with polypi since 1872. In 1873, and from 1875 to 1880, a number of unsuccessful attempts at removal were made by the old method of "going it blind" with a pair of forceps. Operations by the cold-wire snare and forceps under illumination followed, in 1881, 1885, and 1886.

*Status Præsens.*—Examination July, 1887. Several myxomata spring from beneath the left middle turbinated body, and from near the roof of the left naris. Both inferior turbinated bodies are hypertrophied, and on the left side a prominent

spur or excrescence projects from the septum, meeting the turbinated body and causing obstruction of the left nostril independently of the polypi, (Fig. 5.) Polypi exist also on the right side, and large myxomata, together with polypoid degeneration of the septum and of the posterior ends of all the turbinated bodies occlude the posterior nares. (Fig. 6.) There is necrosing ethmoditis of Woakes, dead bone and foetid discharge.

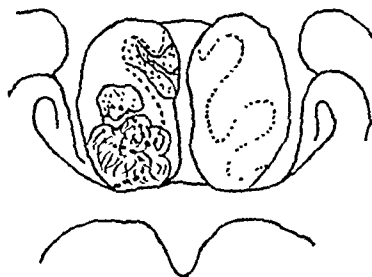


Fig. 6.

The septal excrescence obstructs respiration, prevents drainage, interferes with vision, and renders it impossible to pass instruments to the seat of disease. It was easily removed by a saw which I found convenient to devise for the purpose. The floor of the nose just within the anterior nares is not a perfectly horizontal plane, but is curved, with the convexity directed downward. The septal deformity is close to the floor and conforms to this curve, consequently a straight saw often cannot be introduced, while one curved, likewise, in conformity to the floor of the nose meets with no obstruction. (Figs. 7, 8, and 9.) The

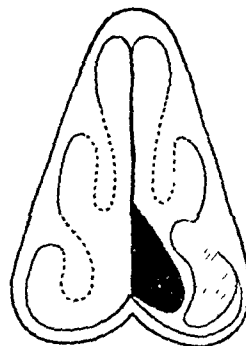


Figure 7.

teeth of this saw, also, cut upon the pull and not upon the push, an advantage, for the reason that on the push it is sometimes necessary to insinuate its distal extremity carefully between parts while on the pull its passage is free. Next followed reduction of the hypertrophies, the polypi being at the same time removed as fast as access could be gained. A fine-point electrode was insinuated beneath the middle turbinated body to one seat of origin, the

edge of the *hiatus semilunaris*, and finally, having tied the velum forward, a properly curved point electrode was introduced through the nasopharynx and all remaining roots and small polypi which were located high up and posteriorly in the region of the superior turbinated body were destroyed.

One year after cessation of treatment Mr. B. writes as follows: "I have remained well, as far as any return of the polypi is concerned, I enjoy free respiration through both nostrils. On breathing with force through both nostrils I am unable to feel the slightest obstruction."

largement of the anterior end of the middle turbinated body. Polyp-buds may form over the surface and ultimately develop into myxomata, or a center of proliferation of the mucous element within the body of the bone may so develop as to cleave asunder the middle turbinated body, leaving a fissure down its center from which will protrude the polypi—a condition of which the following case is an illustration.

Miss P., æt. 20. Catarrhal symptoms for years.

*Status Præsens*.—Examination Sept. 11, 1886. Atropic naso-pharyngitis and horribly foetid in-

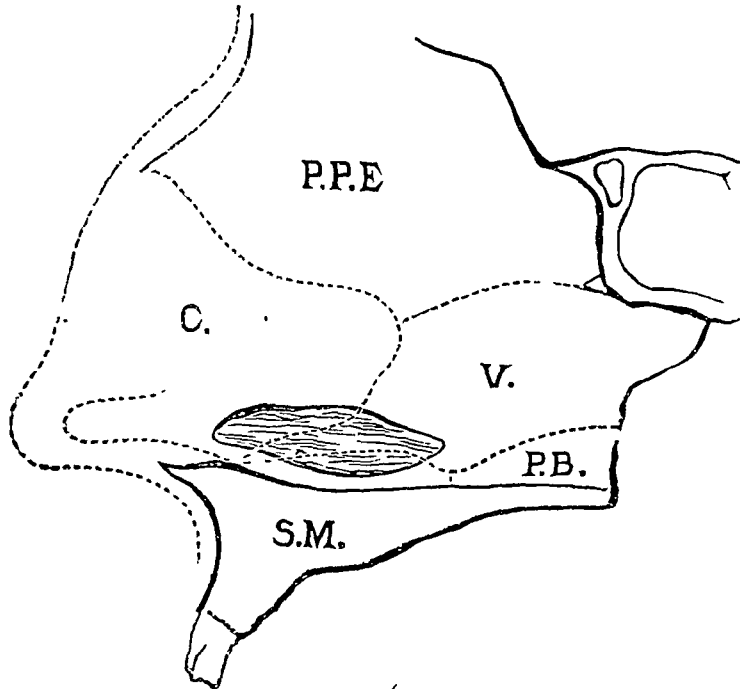


Figure 8.

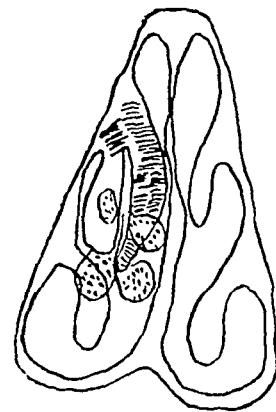


Fig. 10

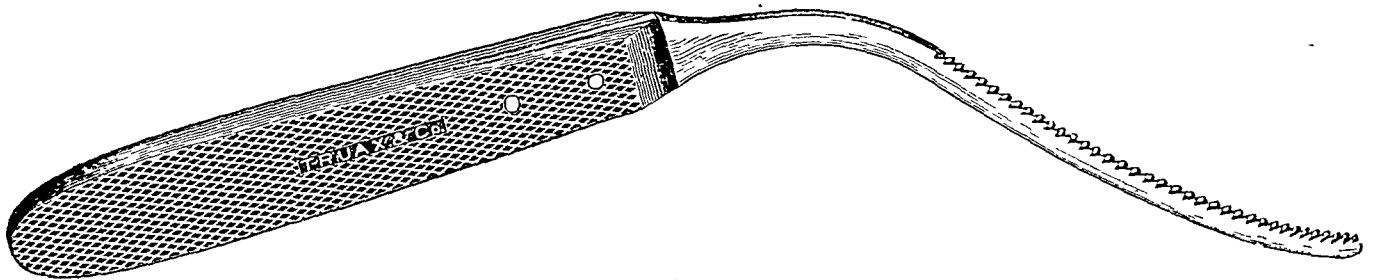


Figure 9.

Necrosing ethmoiditis of Woakes<sup>4</sup> also figures as a persistent cause and complication of nasal polypus. It involves the nasal tributaries of the ethmoid bone, especially its process the middle turbinated body. The *muco-periosteum*, already described as dipping, unseparated, into the spongy structure of the bone, undergoes inflammation, which cause the mucous element to proliferate in the direction of myxomatous formations and the periosteal stratum, also inflamed, to result in necrosis of the subjacent bone.

The earliest appearance of the disease is an en-

crustation. The right middle turbinated body is much enlarged and has the appearance of two bodies because of the cleavage, (Fig. 10.) From this cleft protrude several small polyp, or polyp-buds, and others exist over the surface and in the immediate vicinity. A fine probe inserted into the cleft detects dead bone.

The removal of the entire necrosing turbinated body is sometimes practiced in such cases. In this instance it sufficed to cauterize thoroughly, introducing a knife electrode far up into the cleft and in like manner destroying diseased parts of the surface.

<sup>4</sup> Nasal Polypus, etc., In Relation to Ethmoiditis. 1887.

Under this and other appropriate treatment, the symptoms have been so ameliorated as to cease to be troublesome, and the polypi have not recurred. Necrosis once established, however, becomes an important factor in the persistence of inflammation of the soft parts and prolonged treatment may be necessary to eradicate the disease.

*Necrosing ethmoiditis may exist without polypus, and polypus without necrosis.* The assertion of Dr. Woakes that "when polypus exists necrosis is also present," is not confirmed by my experience, inasmuch as in the majority of the cases herewith reported the most careful search failed to detect necrosis.

Still another complication is illustrated by the case of Miss McC., referred by Dr. E. J. Gardiner. Multiple polypi occlude both nares, and extend backward to the naso-pharynx. An *hypertrophied tonsil* was necessarily abscised before access for light and instruments could be gained. Hypertrophic rhinitis also was reduced by the usual means. The case is still under treatment, but looks favorable to a permanent recovery.

Incrustation and infiltration of a myxoma with calcareous deposits may cause it to resemble an osteoma.

In such a case, observed in an aged person, the whole right naris above the inferior turbinate body was occupied by a fixed and impenetrable tumor. Excised portions of the growth resembled thick egg-shell, covered on its outer surface by mucous membrane and on its inner concave surface with myxomatous tissue, as if, in the course of years, the central part of the polypus had been absorbed, while calcareous deposition occurred in the enveloping membrane. The neoplasm was so firmly fixed to the nasal bones that it was deemed best to remove only a part of it, sufficient to permit of free nasal respiration. It evinces no disposition to redevelopment.

Other nasal neoplasms, by maintaining irritation and obstruction to drainage, may excite the development of myxomata. Dr. Christian Fenger<sup>5</sup> has described an osteoma which after removal was found to have attached to it several polypi.

In like manner myxomata may exist in mere association with primary carcinoma of the nasal and accessory cavities. In a case seen through the courtesy of Dr. Boerne Bettman, in 1887, the right nasal cavity was filled with a soft pultaceous ulcerated mass, which involved the antrum, orbit, and other accessory chambers. Carcinoma or sarcoma was evident. When first seen by Dr. Bettman myxomata only were visible in the naris, and several were removed by a snare. It is most probable that the malignant neoplasm originated in one of the accessory cavities and while extending to the naris excited a growth of myxomata.

Of course the transition of a benign myxoma into a malignant sarcoma or carcinoma cannot be regarded as impossible, since myxomata are histologically related to sarcomata, yet cases of myxoma which even suffer repeated surgical manipulation are so common, and such apparent transitions so rare, that, in the latter case, it were more reasonable to assume that the malignant disease arose primarily and that its presence excited a contemporaneous development of myxomata, as might any other irritant.

*Physical Characters.*—The form, aspect and consistence of a myxoma has been compared to a grape pulp. The natural shape is pyriform, but this is often varied by pressure. When small it is sessile, but it becomes pedunculated by gravity as development proceeds, and the point where the pedicle is confounded with the tissues of attachment is known as the "root." The color varies according to vascularization from gray to yellow, and from yellow to pink and red.

*Pathological Histology.*—A typical myxoma or "myxoma hyalinum" resembles in structure the vitreous body of the eye and the gelatin of Wharton of the umbilical cord. Microscopically there are observed either a few roundish cells, as in the vitreous body, or scattered fusiform and stellate cells which send off anastomosing trabeculae, as in Wharton's gelatin, or both together, and these are imbedded in a large quantity of a homogeneous gelatinous mucin containing intercellular substance. Acetic acid causes opacity by the precipitation of mucin in a finely molecular state. Preparations hardened in alcohol or chromic acid give in undefined portions granular and fibrinous appearances.

Macroscopically the "myxoma hyalinum" is translucent, almost transparent, and of a pale yellowish hue.

But myxomata rarely appear in this purely typical form, the "myxoma hyalinum" being prone to transformation into allied histological structures or to be represented from the beginning by one of its modified forms. Of these the most common is the myxofibroma, which contains a greater but variable quantity of fibrous tissue. Those which are ordinarily called myxomata usually contain enough of the fibrous element to include them, strictly speaking, within the class of myxofibromata.

Multiplication of its round cells imparts to the myxoma a whiter, denser, less gelatinous and more medullary aspect, and it is then named "myxoma medullare."<sup>6</sup> If the spindle cells increase the transformation is into myxosarcoma; when fat is an element it becomes a myxolipoma; so also do we have the myxochondroma. Between these various neoplasms it is sometimes impossible to draw a distinct line of demarcation.

Myxomata are connective tissue growths, and

<sup>5</sup>Living and Dead Osteomas of the Nasal and Accessory Cavities Jour Am Med Assoc, Vol XI, No 6

<sup>6</sup>Perls, Allgemeine Pathologie, S 247

in addition to their occurrence as nasal polypi originating from the mucous and submucous tissues of the nose, they may originate from these structures elsewhere or in the intermuscular septa, nerves, subserous fat and periosteum.

*Symptoms.*—The chief symptom is nasal stenosis which increases with the development in size and number of the polypi, until complete obstruction of one or both nostrils results. Mucous or mucopurulent discharge, cephalalgia, aural complications and other symptoms of a catarrhal nature, together with those incident to mouth-breathing, are observed. To quote the words of a sufferer: "It affects the sight, the hearing, the taste, and the smell of course" Spasmodic asthma, paroxysmal cough and sneezing attacks are among the reflex phenomena which are occasionally excited. For diagnostic purposes it is usually only necessary to look with a good light and to feel with a probe in order to establish correspondence with the physical characters just described, but more rarely an accurate knowledge of all pathological states is essential to a precise diagnosis.

The treatment has been outlined in the relation of the cases. It consists first in the establishment of free nasal passage for respiration, drainage, vision and instrumental manipulation, and to this end in the reduction of hypertrophied turbinated bodies, the removal of septal excrescences, hypertrophied tonsils, etc.

To reduce the hypertrophied turbinated bodies the electro-cautery, applied by means of the point, knife, or snare electrode, is the most convenient agent, although chromic acid, carefully used, will suffice. One of the best methods is to employ a rather heavy point-electrode having its end slightly "curved on the flat" toward the side to be cauterized, and to draw this, in one application, three or four times, at a little more than cherry-red heat, through approximately one inch of the length of the turbinated body, passing each time through the same line until the soft tissue is penetrated to the bony base. From three to six treatments, in different lines on each of the lower turbinated bodies, may be required. Fewer suffice for the middle bodies.

Septal excrescences are removed by the nasal saw, chisel, or burr and trephine drills propelled by the surgical engine or electrical motor. The latter apparatus is more useful for drilling away projecting edges and corners after the use of the saw than for execution of the entire operation. A large variety of nasal saws is necessary in order best to conform to individual cases.

If the septum is seriously deflected it may be necessary to correct it.

Adenoid vegetations of the naso-pharynx must be cleared away.

While this work is progressing such polypi as can be reached should be removed, and others as rapidly as access is gained. This is done by the

galvano-cautery snare, the cold snare, or fine polypus forceps, whichever seems best adapted to the individual polyp.

All operating is done under the local anaesthesia, and *retraction of tissues* produced by cocaine applied by spray in solution not to exceed 5 per cent., and on cotton not to exceed 2 per cent., and operating must cease as soon as hæmorrhage obscures the view.

But the real success of the treatment, after having gained access to the polypi, consists in tracing them to their points of attachment and in thoroughly cauterizing these so-called roots; if not at the same sitting, then at the next, remembering meanwhile the exact spot. Knowing the *hiatus semilunaris* to be a favorite point of origin, those polypi which proceed from beneath the middle turbinated body should be followed up by insinuating a fine electrode slightly curved on the flat to this point, and those which spring from the superior meatus posteriorly must be reached by a properly curved point-electrode introduced through the mouth and naso-pharynx, always under the best illumination.

The latter procedure is by far the most delicate part of the operation, and it is often necessary to tie the velum forward or to use a self-retaining palate retractor.

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## THE IMPORTANCE OF LOCAL TREATMENT IN SYPHILIS.<sup>1</sup>

*Read before the Section on Dermatology and Syphilography, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.*

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There are few diseases like syphilis, for which our therapeutical actions are so well defined, for which we possess specific remedies, upon whose never-failing effect we count with nearly absolute certainty; yet nowhere is the Latin phrase equally true: *duo si faciunt idem, non semper est idem*. The where, when, and how to use those two chief agents, mercury and iodine, seems to be to many a *terra incognita*, and the prescribing of the mixed treatment forms the beginning and the end of their fight against that dread disease, in whatever phase it may be, whether it has attacked the skin only or other more important organs. The result of this *laissez aller* is often a very sad one, and many a perforated septum or palate, or even the loss of a considerable part of the nose is due to the fact that local treatment has not been given a proper place in the management of that case. This may sound somewhat hard, but I speak from ex-

<sup>1</sup> This paper was mislaid by the Section officers into whose hands it came. Hence its late appearance.

perience, and having observed a few such cases of late which impressed me very strongly, I have chosen this theme for my present paper. There is nothing especially new to be said in regard to this subject, at least not for those engaged in the special line of dermatology and syphilis, but it seems to me to be not at all superfluous to call the attention of the practitioners at large to the important rôle which local treatment plays in the management of syphilis, as the text-books usually touch this question in a rather superficial manner. In laying special stress upon local applications, I hope I shall not be understood as underestimating the necessity of constitutional treatment in every single case; this, of course, is a *conditio sine qua non*.

There is in nearly every stage of syphilis more or less opportunity for the successful employment of local remedies, while in some cases, mostly such showing tertiary forms, they are of the greatest importance.

In regard to the primary indurated sore, the majority of physicians to-day refrain from giving constitutional treatment and employ various local measures to secure a speedy cicatrization. The question of excision might well be discussed here, should it not abstract us too much from our theme; there can little be argued against it, when the localization allows it, as healing often takes place by primary intention. As regards its preventive effect opinions are divided. Believing the induration to be the sign of general infection, I fail to see how excision can abort the disease, and the reports of seemingly successful operations are surely capable of different explanations. In the management of hard chancre, it is always desirable to make the induration disappear as quickly as possible. For this end I have found the mercurial plaster a very valuable agent; it constitutes the simplest, cleanest, most practicable and efficacious treatment of the primary sore. As reference will again be made to this plaster, I wish to say that I always use that prepared and spread by Seabury and Johnson, which in every respect proved satisfactory.

After secondary symptoms have appeared, there is a very useful field for local applications. In selecting the plan of a general treatment I have always given preference to the time-honored frictions, which, in spite of all objections, still form the most reliable way to treat the earlier manifestations of syphilis. Besides their constitutional effect they have an undoubted local influence upon the cutaneous eruptions, causing them to vanish usually very rapidly. Patients in private practice will mostly desire before all to have the visible manifestations, as on forehead and hands, disappear as soon as possible; for this purpose a 10 to 20 per cent. ointment of the white precipitate will often work like a charm, and this result will always be highly appreciated by pa-

tients in the better walks of life. Still, the papular syphilides on the palms and soles, the so-called psoriasis specifica, will occasionally prove very obstinate and will call for more energetic measures. Thus chrysarobin has been recommended by Reumont<sup>2</sup> and by Mosengeil,<sup>3</sup> who have successfully used it as an ointment of 10 to 20 per cent. strength. Sigmund<sup>4</sup> speaks very highly of a 1 to 2 per cent. solution of sublimate in collodion. This should be painted once or twice daily on the infiltrated plaques; fissured places, of course, should not be touched by it, these are best covered with strips of the gray plaster. Gilles de la Tourette<sup>5</sup> has found warm local baths with an addition of 1 part each of sublimate and of chlorate of ammonia to 2,000 parts of water, as very efficacious for that trouble. Papules appearing on mucous membranes, mostly in the throat, will readily heal when touched daily with nitrate of silver in strong solution or in substance, and under the use of an astringent gargle.

Of far more importance are topical applications for moist papules or condylomata lata, as these not only are the cause of much annoyance and discomfort to the patient, but also form one of the most common sources of syphilitic infection. As they are so easily reproduced by coaptation of opposing surfaces of the skin, as, for instance, in the genito-crural or anal folds, it is before all necessary to keep such places carefully separated by the application of absorbent cotton or gauze, and to scrupulously remove the fetid secretion by frequent cleansing with diluted sublimate solutions. For the removal of those characteristic vegetations developing so often on such places different caustic pastes have been recommended, but their application is attended with a great deal of pain. I usually prefer the cauterization with the silver stick, after previously anæsthetizing the parts by a strong cocaine solution. Moist papules on the corners of the mouth or between the toes are often very painful, but they heal readily when touched with nitrate of silver and covered subsequently with mercurial plaster.

There is rarely occasion to act against the swelling of lymphatic glands. I lately treated a young man in whom a group of infiltrated glands, situated between the lower jaw and the mastoid process, caused a constant pain and great difficulty in swallowing. An ointment containing iodine, iodide of potassium and ichthyol reduced the swelling in two days and brought perfect relief. For suppurating bubos surgical interference will, of course, be necessary.

During any form of treatment with mercurial preparations the mouth will always require attention, as the saliva soon becomes impregnated with the drug and is the direct cause of mercurial stom-

<sup>2</sup> Chir. Centralbl., No. 3, 1880.

<sup>3</sup> Berl. Klin. Wochenschrift, No. 22, 1879.

<sup>4</sup> Wf. Med. Wochenschrift, No. 41, 1879.

<sup>5</sup> Progrès Médical, No. 30, 1885.

atitis. The most diligent care of the teeth and gums, abstinence from tobacco and irritant substances, and the frequent use of an astringent mouth-wash will greatly aid to delay this incident. Brockhart<sup>6</sup> recommends a solution of 5 to 10 parts of tannic acid in 20 parts of glycerine to 80 parts of water for this purpose. The gums may sometimes become so tender as to make mastication very painful and to necessitate an interruption of the administration of mercury. To overcome this the same author has suggested the use of a 10 per cent. cocaine solution, to be painted on the delicate parts a few minutes before meals.<sup>7</sup>

We have thus far seen that, during the earlier manifestations of syphilis, there are many indications for local treatment. In the later stages of the disease it becomes often imperative, and Hutchinson, who regards tertiary symptoms as mere local sequelæ, has gone so far as saying that only local remedies will lead to success in treating them, whereas constitutional treatment is of minor value.<sup>8</sup> There is much truth in this. While general treatment, especially the use of iodides, is certainly capable of removing many of the symptoms incidental to the so-called tertiary period, it will be entirely unable to arrest the destruction which, for instance, serpiginous ulcers produce on the skin and mucous membranes, and here it is where local treatment is followed by the most brilliant results. Allow me to illustrate this.

Anna S., 16 years old, was brought to my office the 17th of December, 1887, through the kindness of Dr. C. Fenger, who in an accompanying letter asked me to conduct the medical treatment, while he later on should do the surgical part of the work. Without going into the details of the history of this case, which, from its aspect (general cachexia, Hutchinsonian formation of teeth, etc.), and from the anamnesis, had to be regarded as due to hereditary causes, I shall briefly state that the whole upper lip and both alæ nasi were the seat of those characteristic ulcerations resulting from the breaking down of gummatous neoplasms. The cartilaginous part of the septum was perfectly destroyed, only the small anterior cutaneous bridge remaining; accordingly the dorsum was depressed as a result of the defect. The anterior portion of the nose, where not ulcerated, presented that peculiar livid tint, and it seemed only too natural that the necessity of a rhinoplastic operation in the near future was suggested to Dr. Fenger. The affection was said to have begun with a peculiar eruption on the nose about one and one-half year ago, which was followed by a swelling of the upper lip. For the last six months she had been under the care of a prominent specialist for the diseases of the throat and nose. *Sapienti sat!*

I immediately began energetic local treatment

by using the silver stick very liberally every second day. The patient was directed to clean the sores twice daily with a 1 per cent. sublimate solution, and to cover the same in the meantime constantly with the adhesive gray plaster. Iodide of potassium in daily doses of 2.00 was prescribed for internal use. The effect of this treatment was all I could hope for; within ten days the ulcerations were completely healed, a very smooth cicatrization having taken place, and the shape of the nose was preserved. By inserting two small rubber tubes the contraction of the scar tissues around the opening of the nose was prevented. The patient, of course, was only too glad to be saved the trouble of a plastic operation.

Cases like this are, fortunately, in our days not very common; but they must not happen at all, and to let the destruction go on undisturbed until an important organ is endangered, borders on criminal negligence or ignorance.

I have on record the notes of a case where extended, deep syphilitic ulcerations had existed and spread on the scalp of a man for over two years when I began to treat him, in December, 1886, after the principles just mentioned, and in less than two weeks perfect cicatrization had taken place, the patient remaining well ever since.

To the kindness of Dr. M. Mannheimer, of Chicago, I owe a very interesting case of a woman about 30 years old, whom I treated in the winter of 1884. She had been infected about 1½ yrs. ago by her husband, who confessed to having had an indurated chancre, but otherwise did not remember to have suffered from any symptoms of constitutional lues. The woman herself knew nothing of having had a primary sore, nor the usual secondary manifestations, but the first thing she noticed was the appearance, judging from her description, of a generalized rupia about a year ago, which soon became ulcerated. When I first saw her, she was simply covered with those horse-shoe formed sores; the whole scalp was one ulcerated surface, producing an unbearable smell. The back of the right hand was nearly perfectly destroyed, and about sixty more ulcers, from the size of a penny to that of the palm of a hand, were present on the rest of the body. The forehead, nose and chin were the seat of an ecthyma eruption. The patient suffered a great deal, and was hardly able to find comfort in any position. I ordered iodide of potassium 2.00 pro die in solution, a warm bath medicated by 10.00 of sublimate daily for an hour, emplastrum hydrargyri as a local dressing, and white precipitate salve for the face, while the scalp, for the first few days, was to be saturated with salicylated olive oil to facilitate the removal of crusts and detritus, and afterwards washed daily with sublimate soap and anointed with the mercurial salve. The sores were touched every third day with nitrate of silver. Healing soon began to take place on some of the smaller ulcers,

<sup>6</sup> Monatshefte f. prakt. Dermatologie, No. 8, 1885.

<sup>7</sup> Ibid., No. 2, 1885.

<sup>8</sup> Syphilis, Discussion, London Pathological Soc., 1856.



and after a little over two weeks the patient was completely cured, and only continued to take the iodide for some time. She has remained well ever since.

I could cite quite a number of other observations just as striking, but these few examples may be sufficient to show the efficiency of local treatment in these graver forms of cutaneous syphilis.

I wish to add only one word with reference to the cauterization by nitrate of silver, which I regard as a very essential part of the treatment. Its use was formerly accompanied by a great deal of pain; now I always employ previously a 5 to 10 per cent. solution of cocaine for a few minutes, by which it is possible to make that operation without the least objection on the part of the patient.

Ulcerating syphilides may occasionally become phagedenic and resist all kinds of treatment. For such cases Spillmann<sup>9</sup> has recommended the free use of Volkmann's sharp spoon, subsequent application of Paquelin's cautery and dressing with sublimate solution. I have so far had no occasion to resort to these radical measures.

It would be beyond the scope of this merely suggestive paper to speak at length about the treatment of syphilitic affections of the tongue, the nose, throat and larynx, the eye and ear, the bones, etc.; this must be left to those who make these organs their special study. What has been said in regard to the skin applies still more to them. When necrotic bones are the cause of a chronic ozæna, when a gumma is about to destroy an eyelid, when exfoliative perichondritis in the larynx may at any moment endanger the life of a patient, there is no time to wait for the effect of internal treatment; this will certainly in many respects be a valuable adjuvant, but only *local* applications will be able to arrest the destructive processes in those important organs.

## MEDICAL PROGRESS.

**FORTY-TWO CASES OF INTUBATION.**—DR. F. K. PRIEST reports: In a series of 266 cases admitted to the Willard Parker Hospital, intubation was performed for the relief of laryngeal stenosis, in 42, or a little over 22 per cent. of that number, with a percentage of recoveries of 26.19. The majority of these cases were of undoubted diphtheria, with well-marked symptoms of laryngeal stenosis, at the time of admission, while many of them had been without proper care or medical treatment and well-advanced in the last stages of septicæmia, the operation being performed merely for the relief of the stenosis, with no hope of ultimate recovery.

Of the 42 cases 8 were cases of diphtheria com-

plicating or accompanying other contagious diseases, as follows: 1 case of measles and diphtheritic conjunctivitis; 1 of varicella; and 6 of scarlet fever. In 35 of the 42 cases membrane was present in the throat or anterior nares, or coughed out either before or after the introduction of the tube; in the 7 remaining cases, the presence of membrane was not detected at any time during the course of the disease, although there was more or less swelling of the cervical glands with discharge from the nostrils. Only one of the seven recovered.

On admission in 29 cases, the symptoms of laryngeal stenosis were well advanced, 25 of this number being unquestionably diphtheria, and one case in which the presence of membrane could not be detected, a large piece was coughed out during the introduction of the tube. In 5 cases there was a hoarse, croupy cough without dyspnoea, and in 8 the laryngeal symptoms developed after admission. In all cases where the character of the dyspnoea and the general condition of the patient permitted of the delay, intubation was not resorted to until other means for the relief of the stenosis had been tried and failed to give more than temporary relief.

In 3 cases only, where the urine could be obtained, albumin was not found on examination, several dying from acute nephritis with suppression of urine, as occurred once five days after the removal of the tube, all local evidences of diphtheria having disappeared at the time. This one has been included in the list of fatal cases, as the patient was not discharged from the hospital, although it might be considered as a successful case of intubation.

In those cases that recovered, the average time the tube remained in the larynx was 6½ days. No definite rule, however, was followed as to the time of removal. In cases that were progressing favorably the tube was left in position until the membrane had disappeared from the throat and nose and the fever had subsided. The tube was removed in one case on the fifth day, the membrane being still present on the tonsils; on account of violent and persistent coughing and vomiting after taking fluids, the urine was also scanty, high colored, nearly three-fourths albumin; after which the cough was less troublesome, vomiting ceased, and the child took plenty of fluids; although the breathing was somewhat stridulous there was no return of the dyspnoea.

Coughing after drinking was a constant symptom and, in several cases, it was severe enough to induce vomiting. The above case was the only one, however, in which this symptom was severe or constant enough to seriously interfere with the ordinary feeding or treatment. The most troublesome complication, and one that in several cases was productive of very alarming symptoms, was from the collection of mucus in

<sup>9</sup> Ann. de Derm. and Syphilogr., 1885, p. 712.

the throat and consequent obstruction of the tube. This was found especially apt to occur in very young children during the night or early hours of the morning, the child being unable to expel, by coughing, the mucus that gathered in the throat during sleep; as a result the respirations became labored and, if not relieved, gave rise to intense dyspnoea, interfering with the circulation, and, in fact, all the symptoms of stenosis of the larynx. For the relief of this symptom syrup of ipecac, in doses sufficient to produce vomiting, was given with good results, the act of vomiting expelling the mucus, and relieving the dyspnoea without disturbing the tube. Emesis was thus induced several times in one case, which afterward recovered.

The removal of the tube was always followed by more or less stridulous breathing, lasting from a few minutes to several hours, and in several cases by dyspnoea coming on in a few seconds or minutes and rapidly becoming alarmingly stenotic, necessitating the immediate reintroduction of the tube. In a child one year of age, the tube was coughed out on the fifth day, symptoms of stenosis suddenly appeared and the patient became unconscious; tracheotomy was immediately performed. The child revived and was apparently as well as before the tube was removed, but died quietly  $8\frac{1}{2}$  hours after the operation.

In 3 cases, the removal of the tube was followed by symptoms that seemed to point to ulceration of the larynx or trachea, and in one in which a partial autopsy was obtained such was found to be the case.

In 3 cases of severe diphtheria, with nephritis, dying from the effect of the septic poisoning, in which slight dyspnoea was present, the tube was removed and found to be nearly filled with thick mucus and cheesy material, the patients breathing easily and naturally after its removal, without any return of the dyspnoea.

The average age was 2 years and 11 months; youngest 9 months, oldest 7 years. In 25 cases admitted with diphtheria in which a fairly accurate history was obtained, the day of the disease varied from the second to the ninth, the average being the fourth. Swelling of the glands of the neck was marked in 28, slight in 11, and absent in 3 cases.

Discharge from the nostrils was slight in 6, marked in 8, sanguineous in 11, and absent in 7 cases, although membrane was present in the anterior nares in only 13. When present in the throat the membrane was confined to the tonsils in 14, to the soft palate in 1, to the tonsils and soft palate in 8, and to the tonsils, soft palate, and pharynx in 9 cases.

In the majority of cases it was found very difficult to obtain a clear history as to the time of the first appearance of the laryngeal symptoms, *i. e.*, the croupy cough.

In 25 cases the time from the first appearance of the laryngeal symptoms to the introduction of the tube varied from 24 hours to 8 days, the average being about 4 days.—*Medical Record*, February 23, 1889.

PHENYL-PROPIONIC ACID IN PHTHISIS.—DR. C. THEODORE WILLIAMS, in a paper on "New Antiseptics in Phthisis," says of this substance:

Phenyl-propionic acid ( $C_9H_{10}O_2$ ) is one of the numerous derivatives of coal-tar, and consists of acicular crystals of reddish-white color, insoluble in water, but dissolving in spirit (1 in 6), and giving a feeble acid reaction on testing. A saturated alcoholic solution was made and diluted with water, with which, however, it was found not to mix well, 10 minims requiring an ounce of water to keep it in suspension. When so dissolved it had a sour aromatic taste, not at all unpleasant, with a decided aroma, which often pervaded the air of the ward. The alcoholic solution was administered in 10-minim doses with an ounce of water, and was generally increased to 20 minims in 2 ozs. of water three times a day. This was the largest dose given. Twenty hospital patients were selected for the treatment, 6 males and 14 females. The ages of the males varied from 20 to 45, and that of the females from 14 to 41, the average age of the latter being 20.

*Duration of Disease.*—The cases were for the most part those of chronic phthisis, nine of them having been ill for at least two years, and some for longer periods, though in the rest the symptoms dated a few months back. There were the usual symptoms of phthisis, including much wasting and night sweats. One patient was a case of scrofulous phthisis; the rest were of the ordinary chronic tuberculous type. Pyrexia was present to a greater or less extent in four patients.

*State of the Lungs.*—Nine were cases of tuberculization, 6 of one lung, the right being the one attacked in 4 and the left in 2; 3 were cases of double affection, both upper lobes being the seat of tubercle. Cavities were present in 11 cases, more than half the whole number, 3 were single cavity cases, 1 with tinkling cavernous sounds, and the opposite lung free from disease, 1 a double cavity case, *i. e.*, with a cavity in each lung. The remaining 7 were cases of a cavity in one lung and tuberculization of the upper lobe of the opposite one. This gives a total of 11 cases of double affection against 9 of single affection. The case of scrofulous phthisis presented consolidation of both upper lobes with no cavity; there was considerable enlargement of the cervical glands. In 14 cases the sputum was examined for tubercle bacilli, and in 13 they were detected in varying abundance.

It will be seen that, judging by, 1, the large proportion of cavity cases; and 2, of double affection; and 3, the inclusion of some pyrexial pa-

tients, they were not very favorable specimens, and many belonged to the category of unfavorable cases.

The patients took the phenyl-propionic acid for periods varying from 28 to 85 days, the average being 46.7 days. As a rule it caused neither nausea, vomiting nor anorexia, except in 2 cases, in each of which the nausea was overcome by further diluting the medicine with water. The peculiar odor could not be detected in either the perspiration, the urine, or the feces, in all of which secretions it was duly searched for. The patients took no other medicine, except alterative purgatives when necessary.

*General Results.*—Thirteen improved, 4 remained in a stationary condition, and 3 became worse. The improvement consisted chiefly in gain of appetite, strength and color (one interesting point being that in the pyrexial cases the phenyl-propionic acid exercised no influence on the temperature-curve); 14 gained weight, varying from  $\frac{1}{2}$  lb. to 5 lbs.; 4 lost weight, and 2 neither gained nor lost; the largest gain was  $5\frac{3}{4}$  lbs.; the greatest loss 7 lbs. Of the 4 pyrexial patients, 2 lost weight; in 1 it was stationary, and 1 gained weight. The "first-stagers," or cases of tuberculation, did not seem to improve as much as the cavity cases, for while, out of 9 first-stagers, 5 improved, 3 remained stationary and 1 deteriorated; out of 11 third-stagers 8 improved, 1 remained stationary, and 2 became worse. The double cavity case improved greatly, and gained 3 lbs. in weight. From this we should be inclined to infer that phenyl-propionic acid exercises more influence on suppuration than on tuberculation.

*Local Results.*—In 5 patients the condition of the lung showed a distinct improvement, 3 being cases of tuberculation, and 2 cases of cavity with disease of the opposite lung; in 9 no change in the lungs could be detected after the treatment, and in 6 there was either advance or extension of disease, or both. These results contrast unfavorably with the general ones, and confirm a common experience in pulmonary disease, that general improvement is far easier to obtain than local quiescence. The medicine was not observed to diminish the amount of expectoration, or specially to reduce the cough, but decided increase of appetite, and gain of weight, color and vigor were noted in the cases "improved."—*The Practitioner*, February, 1889.

**A NEW FORM OF RECTAL MEDICATION.**—H. F. MEIER suggests, for the rectal administration of glycerine, a suppository, prepared by the simple addition or the incorporation of a special kind of soap. This soap, characterized by extreme hardness, known as stearine soap, has the property of imparting to the glycerine in which it is dissolved the requisite degree of firmness. These

suppositories, from the nature of the composition employed, offer the medicinal ingredients in as compact a form as possible, containing as high as 95 per cent. of glycerine. In this respect they offer a decided contrast to the form prepared by filling hollow cones of cocoa butter, and which, from the nature of the material, are of an uncomfortable size. The hygroscopic nature of the glycerine requires that reasonable precautions be taken to preserve the suppositories in a dry atmosphere, in order to prevent the accumulation of moisture on their surface and consequent dilution of part of the glycerine, with possible loss of activity.

The form adopted is a double-pointed cone. The closing of both sphincter muscles around it results in an upward movement, undoubtedly assisted by the impetus originally given. It has been found that this form offers the least amount of obstruction to such reflex peristalsis. Experience has shown that perfect solution is not indispensable to their activity, but that they are capable of provoking a laxative effect without a noticeable loss of substance. That the glycerine, however, exudes or escapes, so as to exert an effect, can be admirably shown by suspending a suppository at the surface of a test tube filled with water. This is accomplished by simply running a pin through the upper end of the suppository, the ends of the pin projecting over the tube. The glycerine can now be seen to escape and its rapid downward flow observed. These suppositories have been used extensively and with quite uniformly beneficial results, both in this country and in Europe. While it is possible to prepare a suppository which would be entirely soluble or nearly so, success has not yet attended the manufacture on a large scale of such with regard either to economy or safety, that is, as far as their keeping qualities are concerned. A suppository which, while possessing this apparently desirable feature of solubility, melts below the average temperature of the body, 98° F., cannot at the same time be either adapted or expected to withstand the vicissitudes of climate to which it would inevitably be exposed in different sections of a large country.

Cases have been met with in practice, in which these suppositories were not applicable; indeed, in which the introduction of any foreign substance except clysters is contraindicated. Considered from a physiological standpoint, the action of these suppositories would naturally be confined to the rectum and usually the lower part of the great intestine. Where obstruction exists in the intestines too far removed from the tracts just named, other means must necessarily be adopted. Frequently certain febrile or inflammatory conditions of the intestinal tract would alone preclude their use. Such contraindications are self-evident to the observing physician. While these suppositories have in many cases decided advantages over

like contrivances prepared from gelatin, unfortunately their range of application is limited. This results from the chemical nature of the agent employed to solidify the glycerine. It will be evident from these considerations that many medicinal agents, which it would be desirable to administer in the form of suppositories, would be incompatible with the base employed, while others not affecting the soap with resulting decomposition, can be employed to better advantage in this way than when cloaked with an excipient or carrier of a fatty nature.—*Druggist's Bulletin*, February, 1889.

**CITRATE OF CAFFEINE IN ECLAMPSIA.**—B. CORNEY reports a case of a woman, æt. 23, who gave birth to an undersized but full-time child at 7 A.M., August 21st, after an easy labor of three hours. About noon headache came on; at 9 P.M. vomiting took place, and at 11 P.M. convulsions set in, lasting, with intermissions, ten hours. The bromides, hyoscyamus, chloral hydrate, and chloroform did not seem to have much effect. The patient remained in a deep stupor for three nights, and the two intervening days. There was slight fever, a weak pulse varying from 80 to 132, great cyanosis, incontinence of urine, and left hemiplegia. As the vital powers appeared to be rapidly failing, it was necessary to take some decisive step. Corney objected to alcohol, because of the imperfect aëration of the blood that was going on, as evinced by the cyanosis. He was uncertain how much of the stupor and cardiac weakness was due to the disease, and how much to the bromide and chloral. Caffeine suggested itself, and he immediately injected grs. iij of the citrate dissolved with grs. iiss of sodium salicylate in ℥ x of distilled water. This was followed in an hour by six grains more given by mouth, and two grains every two hours afterwards for six doses. Some general improvement took place, the pulse bettered, and the attacks of lividity ceased. The paralytic symptoms diminished in degree, and towards dawn on the 24th signs of returning consciousness were observed. The caffeine was continued for two days, and from this time the patient made a steady recovery. A week later the only remaining abnormalities were a certain degree of muscular weakness and debility.—*Practitioner*, Feb., 1889.

**PERMANENT SLOW PULSE AND URÆMIA.**—Referring to those cases of permanent slow pulse (28 to 30 per minute), in which Charcot has said a medullary lesion must exist, DEBOVE has, in just such a case, examined the medulla and found no lesion. He recently had under his care a man of 80 years, who had been seized, during a course of dyspnoëic attacks, with syncope and epileptiform attacks. His pulse was 32. His heart and lungs seemed normal. He was passing about 600

cc. of urine a day, which contained from 7 to 8 grams of urea and no albumin. Milk diet caused diuresis, and an increase of urea up to 20.5 grams a day and the dyspnoëa disappeared, the slowing of the pulse continuing unchanged. Gingeot has seen the pulse rise from 32 to 40 on the accession of acute bronchitis in a similar case, while the axillary temperature was 102°.—*Le Practicien*, Dec. 10, 1888.

**MENTHOL IN PRURITIC AFFECTIONS.**—Menthol is recommended by SAALFELD (*Deutsche Med. Wochenschrift*, No. 46, 1888), as exceedingly beneficial in cases of pruritis of various kinds. He prescribes it either as a wash or as a salve, the formulæ being:

I. Menthol . . . . . 1.5-2.5 grams  
Spirit vin. rect. . . . . 50.0 "

and

II. Menthol . . . . . 2.5  
Ol. Olivarium . . . . . 7.5-10  
Lanolin. ad. . . . . 50.0

Both preparations have done him excellent service in urticaria, pruritus cutaneous, and pruritus senilis.

A case of intolerable itching consecutive to otherwise successfully treated scabies was perfectly cured by applications of the following ointment:

Menthol . . . . . 2.5 grams  
Bals. Peruv. . . . . 5.0 "  
Ungt. Wilson (Ung. Zn. benz.)  
Lanolin, pur. aa ad. . . . . 50.0 "  
N. f. ungt.

Menthol as a 10 to 15 per cent. ointment proved likewise very valuable in chronic eczema, even in quite inveterate cases.

#### SUPPOSITORIES FOR CYSTITIS.—

R. Iodoform . . . . . 1¼ grains.  
Extr. of hyoscyamus . . . . . 1 grain.  
Cocoa-butter . . . . . 45 grains. ℥.

Make one suppository and introduce high up into the rectum.

The bladder should be washed morning and evening with lukewarm water. If there be any urethral irritation, a pill containing 1¼ grains of terpin should also be taken morning and evening. *Journal de Médecine*, January 6, 1889.

**TO ABORT ACUTE BRONCHITIS** DR. H. C. WOOD recommends

Potass. citrat. . . . . ʒj  
Syr. ipecac . . . . . ʒij  
Succus limonis . . . . . ʒij  
Aquæ . . . . . ʒij

S. Two teaspoonfuls every two hours.

**WARMING MEDICINES BEFORE ADMINISTRATION.**—LEWIN recommends the warming of medicines before administering, and of subcutaneous solutions as well. The absorption, he points out, is much quicker and the doses necessarily smaller. *The Medical Age*, February 29, 1889.

THE

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SATURDAY, MARCH 16, 1889.

## IS THE ANTIPYRIN CRAZE HARMLESS?

The number of new drugs constantly recommended to the therapist is bewildering. The fertility of the synthetic chemists of Germany seems as exhaustless as the coal beds whence they derive their material. Yet it is questionable whether or not the practice of medicine is benefited by this multiplication of remedies. Paraldehyde, hypnone, urethan and now sulfonal, have all in turn been vaunted for their remarkable hypnotic virtues, and yet our old stand-bys, such as chloral hydrate, continue to maintain their supremacy. Some of the most recent testimony on this point has come from no less an authority than Dr. Huchard, whose conclusions were summarized in our letter from Paris in THE JOURNAL of February 23. He has tried sulfonal and found it inert in phthisis, heart disease, subacute articular rheumatism, neuralgia, etc., and therefore believes that its special sphere of action must be in nervous sleeplessness. In his experience it is not free from serious drawbacks, since it may produce an altogether too prolonged sleep and be followed by nausea, dizziness, a feeling of weariness amounting to great lassitude. It is likely, therefore, that none of these hypnotics will wholly supersede chloral.

But there is one group of coal-tar derivatives that has sprung into widespread popularity, and for which the demand seems not to abate. These are the antipyretics, and at their head stands antipyrin. Its sphere of action is wide, but our knowledge of its utility is almost entirely empir-

ical. In addition to powerfully depressing febrile temperatures, it was found to possess remarkable influence over pain, particularly all forms of neuralgia. The result is, that not only do physicians prescribe it for headache, neuralgia, myalgia and the like, and throw it into the rectum to allay the pains of parturition and dysmenorrhœa, but druggists dispense it without requiring a prescription, and the laity keep it on hand, it might almost be said, *on tap*. Is this state of things desirable? It certainly is not, so far as the people and druggists are concerned, and in the case of physicians it may be fairly asked if such empiricism is not calculated to beget loose methods. The ultimate duty of the physician should be to heal by removing the cause, wherever possible, not to rest content with affording temporary relief only. Yet, with a means at hand of removing pain less injurious than opium, is it not a temptation to limit attention to the treatment of symptoms? If, nevertheless, it is urged that such use of drugs is not only legitimate, but actually good policy so long as they appear to be harmless, the query may be made in response, Is antipyrin so harmless as it seems? "Ay, there's the rub;" as yet but very little is known as to the effect of this remedy upon the physiological processes of the human body. A few facts, however, appear to be established. MM. Lépine and Porteret (*Comptes Rendus*, Nos. cvi and cviii), have found that when it is administered to guinea-pigs and when the fresh liver is immersed in a solution of antipyrin, the conversion of glycogen into sugar in the liver is hindered. To be sure, proportionately larger doses were administered in their experimentation than would be given therapeutically; yet, the prolonged or daily ingestion of this drug might produce a similar result in man. Accordingly, on this hypothesis, M. Germain Sée has employed it in diabetes mellitus and actually found a diminution in the amount of sugar excreted. Since, then, this function of the liver is thus limited, is it too much to assume that this organ may have its other functions deranged likewise? particularly, its conversion of nitrogenous matters of the food into urea. Furthermore, Sawadowski (*Centralbl. f. die Medicin. Wissensch.*, 1888, Nos. 8, 9 and 10), in experiments on dogs, discovered in animals with fever an increase in the amount of nitrogenous materials excreted, also that, in the strength of 2 per cent., a solution of antipyrin destroyed the red blood corpuscles,

moved in all cases, in order to compare it microscopically with the other ovary, after sufficient time had elapsed for changes to take place in the second. From his experiments Grammatikati concludes: 1. After removal of the uterus the ovaries continue to functionate. There is no change in the process of ripening and bursting of the Graafian follicles, nor in the formation of the false corpora lutea. 2. Simultaneous extirpation of the uterus and tubes has no influence on the function of the ovaries. It appears, therefore, that both ovaries should be removed when the uterus is extirpated. Soon after completing his experiments, Grammatikati made an autopsy on a woman upon whom Lebedeff had performed hysterectomy three years before. In the ovaries were found Graafian follicles in all stages of development, and the ovaries showed no trace of atrophy.

AMERICAN PHYSIOLOGICAL SOCIETY; *Prize for Investigations in Regard to some Points in the Physiology of the Nervous System.*—With the wish to promote research in certain departments of Physiology, and to aid in defraying its cost, a member of the American Physiological Society has offered two hundred dollars for the best research or researches bearing on one or more of the subjects stated below, viz: "The rate of transmission of nerve impulses, afferent and efferent, and the duration of reflex and reaction time in the higher animals, especially man; also the conditions, normal and pathological, which alter such rates and times." The competition is limited to residents of North America, and the prize will be awarded for original work done after January 1, 1889. The award will be made by the persons that on October 1, 1890, constitute the Council of the American Physiological Society. In making its award, the Council will take into consideration researches of which printed or legibly written accounts, marked on the outside, "Nerve Physiology Prize," have been received by the then Secretary of the Society before October 1, 1890. To obtain the prize, a research must have a direct bearing on human physiology, and good researches on man will be preferred to similar researches on other animals; but experiments on mammals other than man, if applied to the interpretation of the phenomena of the human body and supplemented by observations on man,

will have weight. Previous publication will not debar a research from the competition, provided the work has been done after January 1, 1889. The council reserves the following rights: to withhold the prize if, in its opinion, no research presented is sufficiently worthy; to award only a part of the prize if, in its belief, a research, though meritorious, does not deserve the whole; to divide the prize between two or more candidates in ratios which seem to it just; and if it think it desirable, to require a competitor to demonstrate his experiments to a committee appointed by the Council. Communications concerning prize should be addressed to H. Newell Martin, Secretary, Johns Hopkins University, Baltimore, Md.

BEQUESTS TO WESTERN RESERVE UNIVERSITY.—The Dispensary of the Medical Department of the Western Reserve University, which is now largely maintained by the Hurlbut dispensary fund, consisting of \$10,000 donated by Mr. H. B. Hurlbut, will soon be set on an independent footing. A wealthy local philanthropist has promised an endowment of \$50,000 for the dispensary. Hitherto the work in this department was comparatively limited, but with this additional fund much good work is promised for the future. The Laboratory of the College is now being thoroughly refitted with new and expensive apparatus, and another local capitalist has given the faculty *carte blanche* to buy the best possible instruments wherever they can be purchased.

DEATHS OF CENTENARIANS.—Chesley Heal, born at Westport, Me., on November 16, 1778, died at Searsport, Me., on October 6, 1888, aged almost 110 years. He was a soldier in the War of 1812. It is said that he voted at every election from 1800 to 1880, his first vote having been cast for Thomas Jefferson. He lived an unusually quiet and orderly life, and it is said that he was visited by a physician but once during his long life. On March 1 Mrs. Margaret J. Mitchell, of Cleveland, Ohio, died at the age of 100 years and 2 months. She was born at Georgetown, Me., and lived in Maine until the age of 90 years.

OSSIFYING SARCOMA.—At a recent meeting of the Pathological Society of London, MR. D'ARCY POWER showed a very complete series of specimens of ossifying sarcoma. The case was that of



a girl, æt. 13, who applied for relief on account of a swollen knee, due apparently to tubercular synovitis. The knee rapidly increased in size, and the thigh was amputated in the middle third. Examination of the limb showed a large ossifying sarcoma surrounding the condyles, and extending along the shaft of the bone for almost six inches. A month after the amputation an enlarged gland was removed from the groin; it was so firmly attached to the femoral vein that an inch of the vessel was removed with it. This gland was two inches wide, and was so hard that it had to be divided with a saw. The patient died two months and a half later, and Mr. Power obtained a series of specimens showing the secondary growth in the lungs, ribs, and clavicles, and a large deposit in the ilium. The growths were all of the nature of round-celled sarcoma embedded in a vascular matrix of true bone.

THE ANTIDYSPONIC ACTION OF IODIDE OF POTASSIUM has been studied by PROFESSOR SÉE, who concludes that this drug antagonizes dyspnoea in a double manner: 1. By liquefying the products of catarrhal secretion that block the bronchi and hinder the entrance of air; and by facilitating gaseous changes between the intrapulmonary and the ambient air. At the same time it acts on the respiratory centre and on the pulmonary circulation. 2. By causing a true pulmonary hyperæmia, which has the effect of accelerating the circulation and of increasing the changes. Venous stases disappear under its influence, asphyxia diminishes, and respiration becomes freer and easier. Iodine is not only a respiratory, but a pulmonary medicament. Whether the hyperæmiant action of the iodine is due to excitation of the vaso-motor centre, and especially of the vaso-dilator nerves or not, it matters little. Calmeil has shown that iodine accumulates in enormous quantities in the lungs, as well as in other organs, and facilitates the pulmonary circulation.

THE FORTIETH ANNUAL MEETING.—We desire to call special attention to the fact that the time for the annual meeting of the Association is not far distant. All members and others that contemplate contributing papers to the Sections should communicate with the officers of the Section, in which their papers will be read, as soon as possible. We learn that excellent programmes

are already arranged for several of the Sections. In preparing papers for the Sections the rules of the Association, in regard to papers, should be borne in mind. These rules are printed in the department of Association News, where may be found also a list of the officers of Sections and their addresses.

## ASSOCIATION NEWS.

### American Medical Association. Fortieth Annual Meeting.

*To be held at Newport, R. I., June 25, 26, 27 and 28, 1889.*

*Special Attention is called to the following Rules of the Association:*

It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arrangements at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting. Such programme shall also contain the rules specified in the By-laws and Ordinances concerning the consideration and disposal of all papers in the Sections.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Every paper or address received by this Association, or by a Section, and ordered to be published, and all reports of Committees, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association.

### ORDINANCES.

*Resolved*, That the several Sections of this Association be requested, in the future, to refer no

papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, namely: 1. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value. 2. Such as may contain the results of well-devised original experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

*Resolved*, That the several Sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said authors may select, with the privilege of placing at the head of such papers, "Read to the Section of the American Medical Association on the day of 18." (Vide *Transactions*, vol. xvi, p. 40.)

*Resolved*, That no report or other paper shall be presented to this Association unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication. (Vide *Transactions*, vol xvii, p. 27.)

#### NOTICE TO EXHIBITORS.

Intending exhibitors should address Dr. Chas. A. Brackett, Chairman Sub-Committee upon Exhibits.

The following classes of applications will be entertained:

1. Medical books and stationery, charts and diagrams, busts, portraits, engravings, photographs, etc.
2. Hospital and ambulance plans and models.
3. Surgical instruments and supplies, general and special (gynæcic, obstetric, orthopedic, laryngeal, otic, ophthalmic, dental, etc.).
4. Microscopes, analysis outfits, and electro-galvanic apparatus.
5. Pharmaceutic products.
6. Rubber goods applicable to medicine and surgery.
7. Invalid furniture.
8. Invalid foods.
9. Sanitary appliances, as ventilators, filters, w. c. basins, traps, and similar necessities, and disinfectants.

As a large attendance is probable, while the space available for exhibits is comparatively limited, the advantage of early application will be perceived.

Choice of space will be given in accordance with the date of application.

Applicants should state the character of their proposed exhibits, that they may be assigned to their respective groups:

The Sub-Committee reserve the right of rejection, in case of apparent reason.

HORATIO R. STORER, M.D.,  
Chairman Committee of Arrangements.

#### OFFICERS OF SECTIONS.

*The first name given under each Section is that of the Chairman, the second that of the Secretary.*

*Practical Medicine*: F. C. Shattuck, M.D., 135 Marlborough St., Boston; G. A. Fackler, M.D., 504½ Elm St., Cincinnati.

*Surgery and Anatomy*: N. P. Dandridge, M.D., Cor. 4th and Sycamore Sts., Cincinnati; W. O. Roberts, M.D., 1541 Second St., Louisville, Ky.

*Obstetrics and Diseases of Women*: W. H. Wathen, M.D., Louisville; A. B. Carpenter, M.D., 143 Euclid Ave., Cleveland.

*State Medicine*: J. Berrien Lindsley, M.D., Nashville, Tenn; S. T. Armstrong, M.D., U. S. Marine-Hospital Service, New York.

*Ophthalmology*: George E. Frothingham, M.D., Ann Arbor, Mich; G. C. Savage, M.D., Nashville, Tenn.

*Laryngology and Otology*: W. H. Daly, M.D., 71 6th Ave., Pittsburgh, Pa.; E. Fletcher Ingals, M.D., 70 State St., Chicago.

*Diseases of Children*: J. A. Larrabee, M.D., 1823 Baxter St., Louisville; Chas. G. Jennings, M.D., 544 Jefferson Ave, Detroit.

*Medical Jurisprudence*: Jas. G. Kiernan, M.D., Central Music Hall, Chicago; T. C. Evans, M.D., Cor. Ann and Aliceanna Sts., Baltimore.

*Dermatology and Syphilography*: L. Duncan Bulkley, M.D., 4 E. 37th St., New York; Wm. T. Corlett, M.D., Cleveland, Ohio.

*Oral and Dental Surgery*: F. N. Rehwinkel, M.D., Chillicothe, Ohio; E. S. Talbot, M.D., 125 State St., Chicago.

#### SECTION ON DISEASES OF CHILDREN.

*Preliminary Programme for the Meeting of 1889.*

The following named gentlemen have promised papers on the following subjects:

C. R. Earley, M.D., Ridgway, Pa., "Scarlatina."

John A. Robison, M.D., Chicago, Ill., "Treatment of Heart Diseases in Children."

J. C. Wilson, M.D., Philadelphia, Pa., "Abdominal Neuralgias of Children."

E. M. Brush, M.D., Mt. Vernon, N. Y., "Cows' Milk for Infants' Food."

David S. Booth, M.D., Sparta, Ill., "Epilepsy a Disease of Childhood."

The following have promised papers, but have not yet announced the subjects:

Edmund C. Wendt, M.D., New York, N. Y.

John A. Jeffries, M.D., Boston, Mass.

J. M. Keating, M.D., Philadelphia, Pa.

Wm. H. Edwards, M.D., Philadelphia, Pa.  
 Jerome Walker, M.D., Brooklyn, N. Y.  
 H. E. Pelle, M.D., Louisville, Ky.  
 W. B. Atkinson, M.D., Philadelphia, Pa.

Others that wish to read papers before this Section are requested to communicate with its officers.

#### SECTION ON STATE MEDICINE.

In addition to the list of papers published in *THE JOURNAL* of March 2, the following Committees will report, and papers be presented to the Section on State Medicine.

Report of the Committee on Uniform Medical Legislation in the United States. Dr. Perry H. Millard, Chairman. [At the last meeting this Committee was given another year to report.]

Report of the Committee on Fœticide. Dr. I. N. Quimby, Chairman. [This Committee was directed to report to the Section on State Medicine by resolution of the Association.]

"Medical Legislation in the United States," Dr. Perry H. Millard, St. Paul, Minn.

"Is it Detrimental to the Health of Passengers on Ship-board to Convey to Port the Bodies of Persons who Die at Sea of Non-contagious Diseases?" Dr. I. N. Quimby, Jersey City, N. J.

"Personal Disinfection in Scarletina," Dr. L. D. Waterman, Indianapolis, Ind.

"The Climatic Causation of Consumption," Dr. H. B. Baker, Lansing, Mich.

"The Importance and Essential Needs of Local Boards of Health," Dr. W. C. Rives, New York, N. Y.

Announcement will be made in *THE JOURNAL* of the titles of the proposed papers as soon as the Secretary is notified.

#### SECTION OF LARYNGOLOGY AND OTOLGY.

The Officers of this Section, which was created at the last meeting, have already received several promises from prominent specialists throughout the country, to read papers at the coming meeting. Several others have given partial promises, many of which, we believe, will soon be made absolute, and we feel assured already of a successful meeting.

We urge all laryngologists and otologists in the country, who have a local or National reputation, and who are in good standing with the regular profession about them to do something for the benefit of the profession through this Section. All are *specially requested* to send their names and addresses to the Secretary, whether they are likely to attend the meeting or not.

E. FLETCHER INGALS, M.D., Sec'y,  
 70 State St., Chicago.

W. H. DALY, M.D., Pres't.

#### SECTION ON OBSTETRICS AND GYNECOLOGY.

We are pleased to learn from Dr. Wathen, of

Louisville, Chairman of the Section on Obstetrics and Gynecology, that he has the promise of forty papers for the Newport meeting, in June. The meeting of this Section will probably be one of the most interesting in the history of the Association, for nearly all of those who will read papers have done work of scientific excellence in obstetrics or gynecology. A programme of the Section will be published at an early date.

## SOCIETY PROCEEDINGS.

### Gynæcological Society of Boston.

*Regular Meeting, November 8, 1888.*

THE PRESIDENT, HORACE C. WHITE, M.D.,  
 IN THE CHAIR.

Alvah B. Dearborn, M.D., of Somerville, Mass., was elected to active membership.

DR. W. S. BROWNE showed a

#### NEW DEVICE FOR USING ADHESIVE PLASTER.

The strip of plaster is cut in two and the ends are reunited by a strip of thin rubber gummed to the back side of the plaster. The pull of the rubber, after application, keeps the edges of the wound in apposition.

DR. WHITE referred to the use of a strip of silk tulle secured in place by collodion as an excellent dressing for wounds.

#### PATHOLOGICAL SPECIMENS.

DR. F. L. BURT showed a pair of *ovaries and tubes* that had been removed the day before. The patient, who was about 50 years of age, had suffered for the last twenty-five years, and more especially during the last six years. A laparotomy was performed, making an incision rather longer than usual. Pus-tubes at once presented at the opening, each the size of the double fist. They were very firmly adherent and were removed with difficulty, together with the ovaries. The patient was comfortable when the case was reported.

DR. G. W. JONES exhibited some *membranous strips that came from a patient that had a history of an abortion* last February, and an operation for lacerated cervix last May. Two weeks ago he confirmed her supposition that she was about two months pregnant. A day or two later, she brought him a membranous sac which she said came away from the vagina. The sac, which was filled with jelly and contained certain granules, had burst. Last Monday he found a similar membranous sac presenting at the os uteri, which he removed. Both specimens were somewhat pear-shaped, the size of a silver dollar, and were corrugated. He had not decided upon their character. There had been no pain or hæmorrhage.

DR. C. W. STEVENS said that he had once removed from a young unmarried woman, who believed herself to be pregnant, a very large collection of little cysts, which was probably a mole or a cystic degeneration of the placenta. Previous to the removal of the mass there had been considerable hæmorrhage. He would suggest that Dr. Jones' specimens might be of this character.

DR. H. O. MARCY exhibited *two sets of ovaries and tubes* that he had removed about four weeks previously. The histories of the two patients were so similar that each might represent the other. Both patients were in middle age. One had been an invalid for twelve years, of which time the last six years had been passed in bed. The other patient had been an invalid for seven years, most of which time she had been in bed. Both had great pelvic discomfort for the whole period of four weeks, and to such an extent that both had become morphine *habitués*. The operations were performed in the ordinary manner with an incision in the median line about 2 inches long. Through this opening the ovaries were brought out one at a time, and the broad ligaments, while on stretch, were stitched across with a tendon by the shoemaker's stitch, which included the Fallopian tube close to the fundus uteri. The ovary and tube were then cut away, the peritoneal edges of the stump were sewed together with tendon, and the stump was dropped back into the pelvis. While these operations were being performed, a stream of nascent oxygen gas was directed downwards by means of a tube, the outlet of which was about a foot above the abdominal incision. Thus used nascent oxygen is claimed by some to be antiseptic. There is no foundation for this claim, but it is aseptic and, moreover, it is very invigorating to the operator and his assistants, and, in case of difficulty with the breathing of the patient, its easy accessibility might be very beneficial in restoring her respiration. These ovaries are all enlarged and they were still functioning when removed. The tubes are large and convoluted, and some of the processes of the fimbriated extremity are much thickened.

DR. MARCY also showed a *very large fibroid* that he had removed *per vaginam* from a patient, æt. 41, who had been healthy till two years ago, since when she had been constantly flowing to a greater or less extent. The os uteri was dilated to about  $1\frac{1}{2}$  inch and the whole pelvis was filled. The question arose, could the tumor be removed *per vaginam*? The attempt was made and it was removed in nine or ten pieces. The spoon-saw was first used and then the portion thus separated was cut away with curved scissors. This was repeated till the whole tumor had been removed. The cavity of the thin-walled uterus was then packed with iodoform wool. The patient made a good and rapid convalescence, and the uterus measured only 3 inches when she left the hospital.

The tumor weighed about 3 lbs. Dr. Marcy said that two years previously he had removed in pieces a tumor which weighed 4 lbs., and that this is the largest on record as removed *per vaginam*.

DR. E. C. KELLER asked if the hæmorrhage continued at the menses?

DR. MARCY replied that the menstrual flow had been normal.

DR. KELLER said some time ago she had removed a tumor that weighed 14 ozs. The patient did well, but at the menses there was profuse flooding, which resisted everything till the ext. *hydrastis canadensis fl.* was used, and this acted like a charm. The dose was 20 drops three times a day. The uterus had decreased much in size and there was nothing in the cavity of the uterus.

The Society then discussed

#### SOME POINTS IN THE APPLICATION OF ELECTRICITY AS A MEANS OF TREATMENT OF FIBROIDS OF THE UTERUS.

DR. F. L. BURT referred to the pathological specimens exhibited by himself and remarked that they showed how useless it would have been to expect any good result from the use of electricity in this case, although it seemed to be a suitable case for its employment. As a matter of fact it had been tried, with the result of causing more pain and affording no relief. If administered in too strong current or for too long a time, it might produce sepsis and death. This was a case in which puncture would have been dangerous. Without doubt, electricity in suitable cases works well.

DR. C. W. STEVENS spoke of Apostoli's abdominal electrode of clay as a nuisance, according to his experience after faithful trials. It is filthy and wet, and it is difficult to keep it at the right temperature. In its stead he has had made and now uses an electrode (now exhibited) made of flexible sheet brass, rectangular in shape and about  $7 \times 9$  inches in size. This is covered on its under side by a pad of several thicknesses of antiseptic gauze, cut in the same shape as the electrode and somewhat larger than it in size, so that, when the edges of the gauze are folded up over the ends of the brass plate, they can be held firmly in place by rubber bands slipped over the ends of the plate. This plate can be easily bent into suitable shape to fit the abdomen of any patient. It is simple and clean and, if desirable, the physician can have different ones for each patient. In using, the antiseptic gauze is wet sufficiently with hot water. The other pole he sometimes uses intrauterine and sometimes intravaginal. He has noticed the external measurements diminish 2 inches.

DR. A. P. CLARK said that McIntosh's diaphragm is a very ingenious instrument and it works well. He asked if Dr. Burt referred to galvanism in his remarks. If he had not meant

galvanism Dr. Clark might take exceptions, for he has found faradism to be very beneficial.

DR. BURT said that he has been using an abdominal electrode that he likes very well, and he believes it to be better than the one shown by Dr. Stevens. Cloth, of any desired size and number of thicknesses, is wet with warm water and laid on the abdomen. On top of this is placed a plate of block tin, which is heavy enough to stay in place and is a good conductor.

DR. H. O. MARCY asked, what is the effect on the skin of electricity passing through wet cotton?

DR. STEVENS replied: There is produced a temporary erythema or redness by congestion of the capillaries

DR. MARCY: What strength of current is used? DR. STEVENS replied that he used no galvanometer and that he has been guided by the feelings of the patient.

DR. BURT replied that a current of 100 milliampères, which is the strongest he has used, produced a deep reddening of the skin with a sensation resembling that given by a mustard plaster, and this description of it is very frequently used by the patients. In a very few patients an eruption is produced, though he cannot tell why it is so. This is very similar to the eruption of chicken-pox. There are vesicles filled with fluid which is later changed to pus.

DR. STEVENS said that he had once seen an eruption similar to that described by Dr. Burt, and he had thought it due to the strength of the current.

DR. MARCY: Is the skin cool or hot to the hand after having used the cotton electrode?

DR. BURT: It is warm at first, but it cools rapidly.

DR. MARCY said that he has used Martin's electrode, which contains a considerable amount of cold water through which the current passes, and yet the patient at once complains of warmth. He feels sure that the thin cotton pad could not be used when such high currents are employed as he is accustomed to use.

DR. BURT remarked that he generally employs a current of from 60 to 70 milliampères. The patient never complains after it has been used and not especially at the time. He uses hot water for wetting his pad.

DR. MARCY said that Apostoli emphasized that the electrode must be sufficiently cold to cause the patient to shrink, when it is first applied, and that high currents must be used. Dr. Marcy himself has used as high as 350 milliampères in few cases of large growths. Apostoli says that we should intensify the current, and he sometimes employs stronger currents than Dr. Marcy has used. Dr. Marcy said that both Apostoli's and Martin's electrode fits all of the irregularities of the abdomen. Martin's electrode consists of a hollowed metallic disk, across the bottom of

which parchment is stretched. The disk is perforated to allow filling with cold water, and the opening can then be stopped with a cork. About a pint and a half of water is used.

DR. BURT said that cold is not necessary when a light current is used and that heat is more agreeable than cold.

DR. WHITE: How long should a current of 100 milliampères be used?

DR. BURT: From six to eight minutes.

DR. WHITE: How long should the high currents be employed?

DR. MARCY: From five to eight minutes with 350 milliampères.

DR. WHITE: How often should they be employed?

DR. MARCY said in reply, that in a few cases he has employed it daily until five or six applications had been made. The positive pole in the uterus will necrose tissue, and hence there is pain and soreness. According to Apostoli sepsis should be emphasized; for the septic ferments may easily grow in such partially necrosed tissue, which forms a good nutrient material for them. About two and a half years ago there were reported here in Boston 12 cases with 2 deaths. These may have been caused by sepsis. Apostoli says that the vagina should be thoroughly clean.

DR. WHITE asked if any accidents had been caused by Apostoli's method. To this no one replied. He then asked if any good had resulted from Apostoli's method.

DR. W. S. BROWN offered the criticism that this was too narrow a question, since Dr. Cutter had used electricity for fibroids many years ago.

DR. MARCY said that Dr. Cutter used to employ great currents and that he used no measurements. Once Dr. Garratt had interpolated a galvanometer, which showed that the current was passing through from pole to pole, and thus answered the criticism that it passed around. At this time it was believed that electricity was too dangerous to be used. But the great secret of Apostoli's success is the use of one pole in the uterus and the large abdominal pad. In reply to the question, whether any good had resulted, he would say that at first he was a doubter, but after further conversation with Apostoli, when he came to Boston, he began to follow him. Dr. Marcy has now made several hundred applications to about twenty patients. Each patient thinks herself better, and he himself is sure that some are better. In one case, in particular, the woman could not walk across the street nor ride in a horse-car before the applications. The growth filled the pelvis and pressed on the pelvic organs. She received from twelve to fifteen applications of a current of 250 to 350 milliampères two to three times a week. Some months later the growth had diminished two-thirds or three-fourths, and the woman is now at work at her household duties.

DR. WHITE: How soon after the application should the patient be permitted to leave the office?

DR. MARCY replied that he never uses electricity for this purpose in the office. Dr. Smith, of Montreal, does so use it in some cases with apparent safety.

DR. BURR replied that he causes the woman to lie down for about half an hour after receiving an application of 50 to 75 milliampères. He had recently a patient who had nearly flowed to death, and there was necessity for either electricity or removal of the ovaries. He gave the positive current on the uterus with an aluminum wire electrode, which is claimed to be safe, but it does corrode, and when the eschar comes away there may be hæmorrhage.

*Stated Meeting, December 13, 1888.*

THE PRESIDENT, HORACE C. WHITE, M.D.,  
IN THE CHAIR.

DR. W. SYMINGTON BROWN read a paper entitled

#### CHRONIC CYSTITIS IN WOMEN

in which he said: The bladder is almost as movable as the uterus. We are told in books that its transverse is greater than its vertical diameter; but I suspect that the proportions must be reversed when it holds a gallon of urine, as it sometimes does. Then, again, we are told and told truly, that highly concentrated urine irritates the bladder, and that the irritation may even end in cystitis. But it is not so generally known that "hysterical urine," of low specific gravity, almost destitute of saline ingredients, is also a common cause of irritation and pain.

Acute cystitis is a very rare affection in women; some authors say that it never occurs, except as a sequence of traumatic injuries. At one time many physicians believed that cystitis resulted from using forceps in labor; and I have no doubt that this erroneous belief acted as a bugbear to curtail the employment of that useful instrument. In our day, very few competent practitioners refrain from using forceps on this account. The probability is that cystitis more frequently results from long-protracted labors which should have been shortened by applying forceps or by turning. I have seen only one case of acute cystitis in a woman (apparently caused by swallowing tincture of cantharides with the view to produce abortion), and that case may have been due to other suspected agencies. I have also seen three cases in men, during our civil war, resulting from gunshot wounds in that region. Unfortunately, chronic cystitis is far from being a rare affection in woman. Many of the cases occur after tedious labors; a few are caused by errors in diet, such as highly spiced food, fermented liquors,

etc.; but in my opinion, the larger number result from not emptying the bladder often enough. A false modesty and a genuine lack of opportunity combine to bring about this disastrous effect. It is a curious fact in the history of modern civilization that, with all our pretensions to gallantry, so little has been done in large cities to accommodate women in this respect. Some one has asserted that the amount of soap used in a nation is a fair test of the advance it has made in civilization. I would suggest, as an additional gauge, the number of public urinals for women and men.

When cystitis has lasted for years, the mucous membrane of the bladder may be detached in shreds, and the inflammation spread to the muscular and even to the serous coats. In most cases of long standing the bladder is contracted to one-half, or even less, of its normal capacity. The mouths of one or both ureters become thickened and congested, sometimes occluded, and the urine undergoes changes incidental to decomposition. Small quantities of blood, pus, and mucus frequently appear in it; and, instead of the normal acidity, it is voided in an alkaline condition. Under these circumstances, it is possible, and even probable, that the inflammation may progress upwards, affecting the ureters, and, finally, one or both kidneys. And it often happens that the cystitis excites a reflex pain in neighboring organs, sometimes in parts at a considerable distance from the original seat of inflammation. The treatment essentially consists in affording the bladder as much rest as possible, and in other ways allaying the inflammation. But to give rest to an organ constantly in use, night and day, must prove a somewhat difficult task. I have quite recently had a case, which occurred in a married man with a severe gonorrhœa, who was seized with typhoid fever, and after the usual watery stools for two days the urethritis abated. I attribute the reflex cure to the diarrhœa. Idiosyncrasies seem to affect the bladder even more than other organs; and in women more than in men, age must be taken into account. Before puberty, during the child-bearing period, and after the menopause, constitute eras during which bladder affections essentially differ. The following interesting (personal) case belongs to the last mentioned period. I first visited Mrs. B. on Christmas-day, 1887. She is a married lady with a grown-up family, about 63 years of age, who had always enjoyed health until 1884, when she began to suffer pain in the bladder, accompanied with frequent calls to urinate, night and day. During the whole three years she has never been able to retain her urine for more than an hour at a time, and sometimes she was obliged to use the vessel every half hour or so. Mrs. B. had been under the care of several physicians, regular and irregular. Although naturally of a placid, happy dis-



position, her face showed marks of suffering and anxiety. Pulse 85; temperature 99.5°. Her urine, drawn with a soft catheter, contained pus, mucus, and crystals of the triple phosphates. There was no uterine or ovarian disease. A small caruncle, growing at the lower edge of the meatus urinarius, was removed by means of a wire snare. A similar but smaller growth was found at the neck of the bladder, and this was also removed. For a period of six weeks, she took a tablespoonful of the following solution every four hours during the day; and also used it as an injection into the bladder every night and morning:

R. Benzoic acid, pure . . . . . ℥ij.  
Biborate of soda . . . . . ℥iv.  
Distilled water . . . . . ℥vj. ʒ

She took lithia water as a drink for several weeks, with apparent benefit. All kinds of fermented liquor were absolutely forbidden. Her diet was carefully regulated. Salt meat, salt fish, pork, lobster, beans, highly spiced soups, fried food, and pastry were prohibited. The usual directions to overcome constipation were given. Attention was paid to position in bed, by raising the pelvis with graded cushions, so as to avoid contact of the urine with the *trigonum vesicæ*, the most sensitive spot in the bladder. At the end of six weeks the urine was free from pus and triple phosphates, and it could be retained about two hours. Early in May, 1888, she considered herself cured. As the bladder had become much contracted, I made an attempt, towards the close of the treatment, to dilate it by means of tepid salt water from a fountain syringe. Dilatation should be effected very gradually; for there is some risk of paralysis from overdistention; and it seems possible, when the ureters are abnormally dilated, that the kidneys themselves may be injured. Reference was then made to the efficacy of hygienic, comfortable surroundings, admirable nursing and a contented coöperation on the part of the patient.

DR. HENRY M. FIELD was especially struck with the allusion to the relief or cure of gonorrhœa by the revulsive action of a sharp hydragogue cathartic influence brought to bear upon the bowels; because this practical point in therapeutics was seldom illustrated. Some years ago a quack in Paris coined golden opinions and guineas by the use of an anti-gonorrhœal, which, upon analysis by Fabre, was found to consist of a tincture of colocynth. Fabre's method consisted in giving the patient half a tablespoonful of the tincture (one ounce colocynth pulp macerated in one pint hock or sherry) before breakfast every morning; this omitted every fourth day, and the treatment continued until twenty-seven to thirty doses had been taken. Dr. Field had had success with this remedy, when the balsamic treatment alone had failed. The patient

is thereby cleaned out, not alone as to the alimentary canal, but in blood-vessels; and the bitter of the tincture served as tonic and eupeptic. The application for similar principle in chronic cystitis is obvious. He was surprised that Dr. Brown had not made allusion to the use of balsamic remedies. Dr. Field, for years, had made large account of turpentine and sandalwood oil. The very necessity of their elimination—their resinous matter being carried out of the system through the kidneys—assumed a local action of a partly counter-irritant and alterative character upon the cystic mucous membrane. They were not adapted to acute cystitis, but were very effective in the chronic variety of the disease. Quinia acts in much the same way. Dr. Field's first discovery of its virtue was an accident. He gave it to a patient who was nearly cured of inflammation of the bladder, but had reached the stage when he seemed to be standing still, simply as a tonic. The quinia took hold upon the bladder at once, and apparently completed the cure.

DR. A. P. CLARKE said that, in the main aspects, he coincided with the reader, especially in his remark that he had rarely seen cases of acute cystitis following childbirth. Retention of urine does often occur after laceration of the cervix and other injuries. Cystitis also follows caruncle, fissure of the urethra, and gonorrhœa. Cases of idiopathic cystitis are not as common as has heretofore been believed. Cystitis often results from falls, blows, flexure of the uterus, great distention of the bladder, and unskillful employment of the catheter. The extension of inflammation from vulvitis and vaginitis is an occasional cause of vesical disturbance. So also is the increased vascularity in the parturient women liable to produce over-distention and vesical inflammation. He regarded the mucous coat of the bladder as most sensitive to inflammation; thence the inflammation is liable to extend to the other coats and adjacent structures. Sometimes the disease extends to the uterus, the kidneys, and peritoneum. Under such circumstances treatment will often prove quite unsatisfactory. He is accustomed to use the hot-pack, hot douches, and baths. Electricity (in the form of Faradism), with one pole near the urethra and the other over the bladder, gives relief after the lesions have been attended to. Saline laxatives and mineral waters sometimes help. Bland diluents are of the greatest benefit, especially where the urine is loaded with abnormal products. Opiates are to be avoided as much as possible, and, when used, their local employment is to be preferred. Benzoic acid, in combination with borax, mentioned by the reader, is an old remedy, but it has been a favorite one with the speaker since its endorsement by Dr. Emmet several years ago. Washing out the bladder is often of much benefit; but extra care should be exercised lest the mucous

and muscular coats (which have frequently undergone degeneration) be overstrained, and permanent injury follow. In cases of protracted inflammation, washing out the bladder with a solution of nitrate of silver, (30 grains to the ounce) often yields excellent results. Attention should also be given to the diet. Butcher's meat should generally be avoided, as it is liable to increase the urates and other morbid products which irritate the urinary passages. Dr. Clarke had seen a few cases following delivery; but there was generally a previous history of catarrh in the bladder or gonorrhœa. In one case a large calculus was found in the bladder. Dr. Emmet's operation for an artificial vesico-vaginal fistula is a valuable expedient in severe cases. Dr. Clarke also mentioned a case in his own practice which was permanently relieved by rapid dilatation of the urethra. Since then he has continued to resort to that method in cases where tenesmus is a marked feature, and where the parts around the meatus are contracted and hypertrophied.

DR. OTIS E. HUNT asked if an attack of cystitis occurring a week after delivery in a forceps case would not be called acute traumatic cystitis? [Answer by Dr. Brown: Yes; but I have not seen one.] Dr. Hunt said that he has seen it several times. Little benefit can be obtained except: *a.* From position, which should be horizontal, with the pelvis a little elevated. *b.* From the hot pack (especially in an attack of acute cystitis). A napkin, folded in several thicknesses and of sufficient size, is wrung out of hot water and placed on the abdomen over the bladder. This should be covered with rubber tissue, and this in turn with several thicknesses of flannel, covering a considerably larger extent than the wet napkin itself, and the whole held in place with a bandage. It should be changed twice a day. *c.* From continual drainage. For this purpose the hard rubber catheter has failed; but a soft rubber male catheter of large size, introduced with the aid of cocaine, and retained by plasters around the body, serves an excellent purpose. This may be retained for weeks, the end of the catheter being put into a bottle, which may be kept in the bed to catch the urine. *d.* From internal irrigation through the kidneys. Large quantities of water must be drunk. The patients will not take Cochituate or other common water, but they will drink two or three quarts of Poland water. This not only dilutes the urine, but it actually washes out the urinary tract. *e.* Also from external irrigation, which is done by attaching to a fountain syringe a catheter with a forked tube, provided with a stopcock. The bladder is first filled; but should not be too much distended, and then it is allowed to run out and the bladder is again refilled. This is repeated for ten or fifteen minutes. For the irrigation fluid plain water is used, or a little borax may be added.

The temperature of the water is a very important point; before stating the degree that he considered best, the speaker asked Dr. Brown what temperature he preferred. [Answer by Dr. Brown: Blood heat, *i. e.*, about 100° F.] Dr. Hunt said that he also considered this to be the proper degree, and he has seen harm result from the use of water of too low temperature. He has not derived much benefit from internal medication. In the late stages he uses buchu, but does not believe that it does much good, except as a placebo.

DR. J. F. FRISBIE said that he had not had much experience in this class of cases. The last case he saw followed a very severe childbirth. In reply to his questions he was told that the woman had passed urine freely. On the third day there was much pain, and then he found out that there had been only dribbling. She had acute cystitis, which lasted fourteen days. He prescribed sulphate of magnesia, and she drank Apollinaris water freely. The wet pack was used, and there was a good recovery.

DR. L. F. WARNER said that this class of cases is one of the most difficult that he has been called upon to treat. He has seen a great many cases of acute cystitis, and he believed that most of the chronic cases were once acute. Occasionally cases are seen which have been caused by prolonged retention, *e. g.*, in the case of shop-girls. The urine decomposes in the bladder and it contains bacteria. He thought that Dr. Hunt's treatment was good, but that it alone would not cure very bad cases. In acute cases he always gives calomel, Dover's powder, and hyoscyamus. Fifty years ago dependence was largely placed on derivatives in the treatment of gonorrhœa. Epsom salts were always used, and the patients learned to expect them. In chronic cystitis he had obtained the best success from the use of irrigatives, and he prefers a solution of corrosive sublimate, followed by iodoform. He uses a double canula with a stopcock, and a fountain syringe. He first washes out the bladder thoroughly with water at 100° F. The bladder is gradually filled with water till the patient begins to complain, then the stopcock is opened, and an outflow is made, while at the same time the corrosive sublimate solution is allowed to run in. It is quite important to keep the bladder distended, so that the fluid may come in contact with all portions of the mucous membrane. The irrigation is continued for some time, and is followed by an injection of iodoform, which is left in the bladder. The urine should be kept as nearly neutral as possible. In reply to the question as to the strength of the solution of corrosive sublimate that he would recommend, Dr. Warner said that the sensibility of patients varies: one will bear 1 to 5,000, while others will not bear 1 to 10,000. He begins with a weak solution and feels his way along. Sometimes a douche into the bladder of a solution of

quinine (*e.g.*, a drachm to a pint of water) will give much relief. A solution of the sugar of lead was used in one case. He emphasized the importance of getting the system into as good a condition as possible to secrete healthy urine.

DR. FRISBIE asked if it is especially advantageous to have the water boiled before using?

DR. WARNER: I don't know about that. It is always easier to bear than cold water.

DR. HUNT asked if frequent micturition is not often relieved by drainage by means of a retained catheter?

DR. WARNER replied that that is true if the patient can bear it. The effect of cocaine, which has been suggested, is not lasting.

DR. W. S. BROWN emphasized that the continued use of cocaine is dangerous on account of its constitutional effects.

DR. F. L. BURT said that this is a most important class of cases, and one most difficult of treatment. Some cases can only be cured by making an incision into the bladder through the vagina, *i. e.*, by making an artificial fistula, and thus securing drainage. Irrigation is an important factor in the treatment. In one case, a douche of corrosive sublimate (1 to 2,000) cured a cystitis of twenty years' duration. Some cases, however, are not apparently affected at all by the irrigation. He has lately seen a case in which a 1 to 500 solution had no effect. He believes that one important cause of cystitis is the continual flowing over the meatus of a 1 to 2,000 solution of corrosive sublimate for an operation. To avoid this, after commencing with the sublimate solution, he concludes the operation by substituting hydro-naphthol.

DR. J. H. WOODS said that he saw a case two years ago that was cured by the use of Poland water. The young man had had an attack of gonorrhœa, and he was passing very acid urine. Alkalies were administered without any effect. After a time he passed into the hands of a homœopath, who flushed him with Poland water and cured him.

DR. A. L. NORRIS had seen a few cases following difficult labor. He had been accustomed to treat them with irrigation, for which he employed a double silver catheter. These douches were given twice a day for several days, with excellent results. Hot fomentations are of benefit, as also are alkalies and anodynes given internally.

DR. HUNT asked if the catheter had been used in these cases before the cystitis had appeared?

DR. NORRIS replied that it had; but that he was accustomed to use a new catheter for each patient.

DR. HUNT said that he had a suspicion that many attacks of acute cystitis were caused by the introduction into the bladder of foul discharges from a catheter that had not been thoroughly cleansed after using.

DR. BURT said that the catheter was a very important factor in the causation of cystitis. Many old men use their catheter several times a day, lay it upon their bureau, and have no bad results; but women cannot do so. Not only must their catheter be carefully cleansed, but the external parts must be washed.

DR. NORRIS had never thought it necessary to wash the parts before using the catheter in a parturient case; but he thought the point worthy of consideration.

DR. BURT thought it a good plan to wipe the meatus with cotton wet with some antiseptic solution, and then press it down so as to separate the vulva, and leave it there.

DR. HELEN L. BETTS referred to attacks of vesical irritation due to pressure of the clothing, which were relieved by the removal of pressure and weight.

DR. HUNT wished to emphasize the point noticed by the reader of emptying the bladder as often as the desire occurred.

DR. S. N. NELSON said that the urine in cystitis contains a greater or less amount of pus in the sediment, and there is present a small amount of albumen proportionate to the pus. Bacteria termo are found in great numbers. The most important factor in the causation of cystitis, whether in man or woman, is the introduction into the bladder of bacteria, and, as a consequence, a fermentation of the contents of the bladder is set up. In this way may be explained most of the cases which have been referred to as occurring during an attack of gonorrhœa, or after labor. The means by which the germs are most commonly introduced is the catheter, which has not been properly cleansed. To avoid this, it is a good plan to soak the soft rubber catheter in a solution of corrosive sublimate (1 to 2,000) before its introduction; and, in the case of a patient who requires its use constantly, it may be left in soak when not in use. The meatus and vulva of the woman should be carefully cleansed with sublimate solution before the introduction of the catheter, and it is always a good plan to bring to aid the sense of sight when passing the catheter. If, unfortunately, in spite of all these precautions, an attack of cystitis is induced, or if a case is seen where the chronic stage has been reached, Dr. Nelson believes that more good can be done by local than by systemic treatment. In acute cystitis the drinking of large quantities of water so as to flush the uriniferous tract is an excellent procedure. It matters little in what form the water be taken, so long as the quantity is large. The imbibition of mucilaginous substances is desirable; and for this purpose flax-seed and slippery-elm teas are to be recommended. As an adjuvant, the neutralization of the urine until litmus paper no longer turns red is a great comfort to the patient; for, in acute cystitis, the urine has

become unduly acid, having undergone the acid fermentation in the bladder. This is easily effected by administering citrate of potassium. Local treatment, however, is the most effectual, both in acute and in chronic cystitis; and for this purpose irrigation by means of a double-tube catheter of soft rubber is best. The irrigation fluid should be a solution of corrosive sublimate as strong as can be borne. This will vary from 1 to 10,000 to 1 to 2,000, according to the temperament of the patient and the condition of the mucous membrane of the bladder. The water should be boiled to kill the germs contained therein, and then cooled. In acute cystitis a solution of boric acid may be advantageously employed for half an hour to an hour, in order to thoroughly cleanse the inner surface of the bladder, and the irrigation may then be completed with the sublimate solution, which should run from 10 to 20 minutes. The irrigation fluid is most effectual when somewhat warmer than blood heat, say about 102° F. After washing, the injection of an emulsion of iodoform is a good thing. The irrigation may be employed as above, once or twice a day, in aggravated cases.

DR. W. S. BROWN, in closing the discussion, said that he had left out the surgical treatment in his paper. There are many cases in which it is necessary to open the bladder by making an artificial vesico-vaginal fistula. This is good practice in hospitals, but it cannot be carried out so well when the patient is at home. Dilatation of the bladder should be carefully and cautiously attempted, because in some cases the bladder wall is thin, the mucous and muscular coats have disappeared, leaving only the serous coat, and rupture may occur after even moderate pressure.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR REGULAR CORRESPONDENT.)

*Radical Cure of Inguinal Hernia—Surgical Treatment of Uterine Retroversion—New Method of Shortening the Round Ligaments—New York County Medical Association.*

At the first regular meeting of the Academy of Medicine at which the new President, Professor Loomis, occupied the chair, Dr. Charles McBurney, whose admirable operation has of late become so popular among the surgeons of this city, read a paper on *The Treatment of Inguinal Hernia with Reference to Radical Cure*. As an introduction to the exposition of his own operation, which he said had been the result of much thought and labor, he presented some of the considerations which had led him to attempt a procedure different in some respects from any that had preceded

it. In 1886 he met with some cases in which a return of the trouble after operations for the radical cure of hernia convinced him that one great essential to success in any such operation was the complete removal of the sac. The first predisposing cause of hernia he believed to be the pouching of the peritoneum at the internal ring, and therefore, in order to cure a hernia, it was necessary first to prevent laxity at this point, and then to support the peritoneum firmly at this point. He referred to various procedures designed to completely eradicate the sac, and gave a somewhat detailed description of Macewen's method. This operation, when practicable, he said, undoubtedly removed the sac; but it was often difficult or impossible to carry out. In selected cases, however, remarkable results had been obtained with it. Ball's method of twisting the sac he spoke of as a somewhat blind one, not free from serious objections; while some sacs also were altogether untwistable.

In his own operation Dr. McBurney splits the anterior wall of the inguinal canal all the way up to the internal ring. This procedure he supposed at first was original with himself, but he afterwards learned that it had been previously practiced by Riessel. This, he said, exposed the whole length of the sac, and when this had been done the neck of the latter could be disposed of either by ligature or by suture. In this way it was very easy to restore to the peritoneum the natural smoothness which he regarded as another of the great essentials to success in any operation for the radical cure of hernia. In all cases where it is applicable he much prefers the ligature to the suture. The only certain method of closing the entire canal except that portion of it occupied by the cord, he went on to say, he believed to be the open treatment of the wound, and even this was very difficult in some respects. It was requisite, for instance, that the whole wound should be packed extremely closely in order to secure granulation throughout its entire length. The objection had been raised against cicatricial tissue that it melts away and in time yields, and it had also been urged that cicatricial tissue does not prevent the frequent occurrence of ventral hernia after laparotomy; but he was firmly convinced that the cicatricial tissue here was sufficiently strong and permanent for all practical purposes, while the circumstances after the operation referred to were entirely different from those met with after laparotomy. Some operators had practiced the method of sewing up or narrowing the internal ring; but in reality, since the ring was naturally open quite wide, the stitches were of no avail in narrowing it.

He then proceeded to give the details of the operation employed by him for the past two years. Careful antiseptic precautions having been taken, a free incision is made, beginning a little outside the internal ring, and this is rapidly deepened

over the whole length of the canal. The canal, when reached, is split up to the outer edge of the internal ring, and the deeper layers of the sac having been dissected off, the cord is separated from the sac up to a point a little within the abdomen. The sac is freed from all adhesions and omental attachments, if there are any, and is then held high up from the internal ring, in order to prevent the return of any portion of intestine or omentum; when a ligature is applied at the very highest point. In congenital hernia, however, it is often necessary to suture, instead of ligating.

The wound is left entirely open, and from four to eight stitches are used to fix together the skin and the tissues which form the upper wall. As many more are employed for the lower wall; but as the wound is unnecessarily wide, some tendon sutures are usually passed deeply through the skin and superficial fascia. Iodoform is freely dusted about the wound, and then it is very thoroughly packed with iodoform gauze. The rectal end of the wound, however, is sewed up without a packing, and a drainage tube inserted at its lower extremity. Great care is used in making the external dressings, and in order to prevent contamination by urine rubber bandaging is employed in the case of adults and a plaster of Paris casing in children. Frequently, also, the urine is drawn with a catheter for several days succeeding the operation. At least five or six weeks are required for the healing, but Dr. McBurney believes that this comparatively long period in the prone position is time well spent in such cases. None of his patients are allowed to wear a truss or support of any kind after the operation, as he regards such appliances as positively injurious under the circumstances.

The advantages which he claims for the operation are as follows: 1. It is the only method in which the sac is completely obliterated. 2. The walls are very firmly united throughout their length. 3. The wound being open, septic complications are avoided. 4. The rapidity with which the operation can be performed renders it applicable in all varieties of cases. He said he had now employed this method in thirty-six cases. There was one fatal case, but this result was due to alcoholism. In three the wound became infected and the healing was slow; although there was no general-sepsis in any of them. In one case orchitis was set up, and in one there was a relapse of the tumor; the cause of this relapse being without doubt, in his opinion, the fact that the sac was not ligated sufficiently high up. In conclusion, he said that within the past week he had either personally seen or heard from thirty-one of the cases, and that the result in all was thus far perfect. Of the remaining cases, two could not be found, and two were still under treatment. The various steps of the operation were very clearly shown by means of large colored drawings taken

from life, and at the end of the paper Dr. McBurney presented a considerable number of the cases operated on for examination.

The surgeons who took part in the discussion were all unanimous in according the highest praise to the operation. Dr. L. A. Stimson, the first speaker, thought Dr. McBurney was deserving of special thanks for his use of the cicatricial packing to the peritoneum, as he thus came squarely out against the ancient idea that cicatricial tissue was weak and untrustworthy. One of the chief advantages of the operation, and one which had not been particularly dwelt upon in the paper, he said, was the very great freedom from the risk of septic processes which characterized it. There was no necessity for drainage, and no drainage was employed except at the lower end of the wound in the scrotum; the wound above being left entirely open. As to the simplicity of the operation in the matter of ligating the neck of the sac, and restoring the peritoneum to its normal state, he had nothing but the warmest admiration to express for this also.

To realize the full advantages of the operation it was only necessary to consider the alternative measures which were at our disposal for treating the canal; all of which were comprised in an attempt to restore the original canal. In many old hernias, however, there was in fact no longer any canal. The internal ring was dragged down until it overlapped the external, and there remained simply a hole covered on one side by the peritoneum, and on the other by the skin and subcutaneous fascia. There was a complete absence of the valvular arrangement of the sides met with in the normal canal, and while many surgeons had attempted to restore this valve-like arrangement, they had always failed. Now, if we could not restore the canal, some alternative for this must be sought; and this formation of a plug of cicatricial tissue for supporting the peritoneum seemed to him a most excellent device.

Dr. Gerster, while expressing great admiration for the McBurney operation, thought it was as yet too soon to decide as to its permanent value; time being the only test for such procedures. In many old cases of hernia, with widely dilated ring, he did not consider it necessary to slit up the anterior wall of the canal, as he believed that the upper part of the sac could be reached sufficiently well without this.

Dr. Abbe said it was perfectly true that we were obliged to leave the question of radical cure to time, but nevertheless he thought surgeons ought in the meanwhile to express their opinions in regard to the various methods advocated. During the past year he had performed Dr. McBurney's operation in seventeen cases, and he felt entirely convinced that it was the best that was now at command. In all he had operated in 117 cases, and fifty-two of these were by Macewen's method,

by which he had been greatly attracted. Macewen claimed that other operators did not succeed with it as well as he himself because they did not operate in the right way; but if the procedure was so difficult that no one but Macewen could perform it properly, it was scarcely worthy of the confidence of the profession. He had now abandoned all other methods for Dr. McBurney's, and one of the greatest advantages of the latter he considered its simplicity in general practice. He had not as yet, however, felt willing, like Dr. McBurney, to leave his patients without a truss after the operation.

A considerable number of other speakers also took part in the discussion. In concluding it Dr. McBurney said in regard to the test of time that no results could, of course, be claimed if it were said arbitrarily that we must wait ten years before deciding as to the validity of the cure in any given case. While, however, longer time was certainly to be desired, he thought we could at least study the principles that ought to guide us in such operations. He had not, with a single exception, refused to operate in a single case; the exception being an old man suffering from advanced Bright's disease and in a generally broken down condition. In every case except the one in which the relapse occurred he was quite satisfied that the sac was completely obliterated and the peritoneum rendered smooth. As to omitting to split the canal in certain old cases where the ring might be perhaps 2 inches in diameter, as suggested by Dr. Gerster, he claimed that even in this class of cases the sac could not be obliterated unless the canal was slit up so that the ligature could be applied at the highest possible point. Although he hoped for the contrary, it might be that in the course of time some of his cases would relapse. Up to the present, however, with the exception of the one mentioned, he had failed to find any evidence of threatened or commencing recurrence in any of them.

At the last meeting of the Section on Obstetrics and Gynecology of the Academy Dr. W. Gill Wylie, who is widely known as one of the boldest and most successful operators among American gynecologists, read a paper on *Surgical Treatment of Retroversion of the Uterus with Adhesions, with a New Method of Shortening the Round Ligaments*, in which he expressed views which not very long ago would have been very generally pronounced as decidedly "advanced," but which have of late been steadily gaining ground among many of our most able specialists in this department. Dr. Wylie believes that in nine cases out of ten where there is retroversion with adhesions the tubes and ovaries are diseased, and consequently, that any treatment which does not involve the uterine appendages, if these are diseased, is not only useless but dangerous. He expressed himself strongly on this point because

he finds that many still treat such cases with pessaries, and that even quite young teachers of gynecology still practice and teach the use of the uterine repositor, an instrument that for many years he has considered obsolete and dangerous, since by opening the abdomen it has been found that in the vast majority of instances retroversion with adhesions means salpingitis, local peritonitis, etc., and it is now known why, as a result of trying to break up adhesions years ago, such patients had so many attacks of so-called cellulitis.

While in some cases the ovaries and tubes are not involved, he said we could not in all instances be sure of this without performing laparotomy, and when the abdomen has once been opened, he has devised a simple and efficient way of fixing and holding the uterus forward. Having freed all adhesions, he catches up the round ligament, at a point about midway between the fundus of the uterus and the pubic bone, with a pair of pressure forceps, pulls it up through the abdominal wound, and with a scalpel scrapes the peritoneum on the inner side of the ligament, so as to make it raw. He then folds together the two halves of the ligament and brings them in close apposition by means of two or four strong silk ligatures passed around and slightly into the ligament, so as to hold the folds of the latter firmly together, but not using sufficient force to cut into or destroy the ligament. Afterwards he may make still closer apposition, if this is indicated, by means of finer and more superficial sutures. These steps are then repeated on the other round ligament, and the wound closed.

This procedure, he states, is easily carried out, and if the sutures are not placed deep enough to injure the bladder or include a ureter, he considers it about as free from danger as an exploratory incision. He thinks it is much to be preferred to the so-called hysterhaphy, and is much better than Polk's suggestion to close the abdominal wound and do Alexander's operation after healing up the adhesions. Dr. Wylie has done this operation for the past three years and with excellent results in some cases, and he says that long before this, when removing the tubes and ovaries, he so included the round ligament in his pedicle ligature as to shorten it and sustain the fundus forward.

At the February meeting of the New York County Medical Association formal addresses were delivered by Dr. J. R. MacGregor, the retiring President, and Dr. C. S. Wood, President-elect of the Association. The former was mainly devoted to the consideration of the relations of medical science to the various interests of the community, the advancement of the standard of medical education, and the advantages to be derived from active work in medical societies; while the topic proper of the latter was the *vis medicatrix naturæ*. This Dr. Wood believed to be for the



most part a delusion and a snare, and, denouncing the so-called expectant plan of treatment of disease, he stated that his faith in drugs had only increased with his experience in practice. A portion of the address was taken up with suggestions for increasing the efficiency and scientific work of the Association.

P. P. B.

## MISCELLANY.

**MEDICAL GRADUATES.**—Following are the numbers of graduates of medical schools that have closed the session of 1888-89: Ensworth Medical College, St. Joseph Mo., 9 graduates; Michigan College of Medicine and Surgery, 11; Medical Department of the University of Louisville, 128; Medical College of Indiana, 27; Southern Medical College, Atlanta, 50 (?); Medical Department of Georgetown University, 14; Medical College of the State of South Carolina, 25; Medical Department, State University of Iowa, 43; Miami Medical College, 12; Medical College of Ohio, 85.

**THE LACAZE PRIZE** of 10,000 fr. has been awarded to Dr. Malassez, Director of the laboratory of histology of the College de France, for his work on tuberculosis.

**PUBLIC MEDICAL LIBRARIES.**—In the proceedings at the reception given to Dr. Oliver Wendell Holmes on the occasion of his presenting his library to the Boston Medical Library Association, Dr. R. M. Hodges, president of the Association, gave some facts regarding the public medical libraries of this country. "First," he said, in point of time, is the library of the Pennsylvania Hospital, founded in 1760; second, that of the College of Physicians, in Philadelphia, founded in 1788; third, the New York Hospital library, in 1796, etc. Of course, the library of the surgeon-general's office has surpassed in size all these, having a large annual appropriation and a magnificent librarian. Next in rank comes the library of the College of Physicians; next, that of the Academy of Physicians; and our library comes fourth in rank. After that come the Medical Department of the Public Library of Boston, and the New York Hospital Library. In other words, although the youngest of the seven libraries, ours has already passed three of them. We have nearly twenty thousand volumes."

**A DOCTRINE OF PUBLIC POLICY.**—Another legal decision of interest to physicians has just been announced in this city, and as it is the first of the kind coming before the courts, and will now be accepted as a precedent, we hasten to give our readers the benefit. The suit was brought to recover fees for consultation rendered by a physician while at a distance, the consultant in the case being the patient's own regular attendant, while the temporary attendant was a physician unacquainted with the previous ailments, and asked the regular attendant for advice in the matter as the patient's case assumed a grave form. The patient died at the end of three weeks, during the absence of his sister, his only surviving relative, who was at the time travelling on the continent of Europe. As residuary legatee, the sister not only refused to pay the consultant's fees, but roundly abused both him and his confrère, and like many other doctors, there was nothing for him to do but to bow himself out and enter his claim for collection according to law.

At the adjudication of the case before the Orphan's Court, counsel insisted that although the patient may not have been competent to decide as to the need for consultation during his illness, he was in such a condition when the attendant first saw him, and the auditing judge de-

cided that the consultant having no contract to show was not entitled to recover, as the physician first called had no authority to employ him. An appeal was taken, and on the first of the present month an opinion was delivered by Judge Ashman, reversing the decision of the auditing judge, and allowing the amount claimed on the ground that it was the doctrine of public policy. The judge said: "If the right, in the consulting physician, to compensation for his services, is without legal merit, then the law is a reproach to conscience. That it has not been passed upon hitherto means nothing, or rather, it means that it has never been questioned, any more than the right of the physician to charge his patient with the drugs he has purchased, or the nurse he has hired for him, when 'drugs and nursing were indispensable to his recovery.'"—*Medical Register*.

**THE PORTER COUNTY (IND.) MEDICAL SOCIETY** recently met at Valparaiso and elected officers as follows: President, G. W. Arnold; Vice-President, A. P. Letherman; Secretary, D. J. Loring.

**THE BIRMINGHAM (ALA.) ACADEMY OF MEDICINE** held its regular monthly meeting on March 6. The officers of the Academy are: Dr. C. B. Richards, President; Dr. J. G. Orton, Secretary; Dr. W. A. Moore, Treasurer. The Academy was established in 1854. Nearly all of the charter members are now dead. Dr. Orton has officiated in the capacity of secretary from the time the society was organized until now. The next meeting will be held on the Third Thursday in April.

**THE CINCINNATI ACADEMY OF MEDICINE** elected the following officers on March 4: President, Dr. William Judkins; first Vice-President, Dr. George W. Ryan; second Vice-President, Dr. W. S. Christopher; Recording Secretary, Dr. Geo. A. Frackler; Corresponding Secretary, Dr. J. M. Withrow; Treasurer, Dr. Geo. E. Jones; Librarian, Dr. David De Beck; Trustees, Dr. S. G. Highway, Dr. Giles S. Mitchell, Dr. C. D. Palmer.

**THE NORTH-EASTERN KANSAS MEDICAL ASSOCIATION** met at Holton on March 6. The attendance was good and the exercises interesting. The next Meeting of the Association will be at Whiting the first Tuesday in June.

**SEXUAL CAUSES OF INSANITY.**—The Medico-Legal Society of New York has appointed a committee to consider this subject. It is composed of Clark Bell, Esq., President of the Medico-Legal Society; Dr. P. Bryce, Superintendent of Insane Asylum at Tuscaloosa, Ala.; Alice Bennett, M.D., Superintendent of the Pennsylvania State Hospital for Insane, at Norristown, Pa.; Dr. C. A. Rice, Superintendent of Mississippi State Hospital for the Insane, at Meridian, Miss.; Ex-Governor Hoyt, of Philadelphia, Pa.; and E. W. Chamberlain, Esq., of the New York Bar. This committee will be glad to receive the views of alienists, superintendents of asylums, and others as to the question: "How far is Insanity due to Sexual Causes?" Dr. Bennett will read a paper upon this topic before the Medico-Legal Society of New York on March 13.

**DR. H. R. STORER**, Newport, R. I., Chairman of the Committee of Arrangements of the American Medical Association, has recently received the diploma of associate membership in the Archaeological and Geographical Society of Pernambuco, Brazil.

**THE AMERICAN MEDICAL ASSOCIATION.**—One of the events of the coming season will be the fortieth annual convention of the American Medical Association, which will be held here the last week in June. The last meeting of this Association occurred at Cincinnati in June last, when nearly 1,500 physicians from all parts of the country were present. In addition to this large number, many of whom bring their families, there were upwards

of 100 exhibitors of instruments, medical preparations, invalid appliances, prepared foods and the many other industries connected with the medical profession. The Association includes the leading doctors in regular practice, college professors, hospital surgeons, etc., throughout the country, and is modeled after the great British Medical Association. It will meet this year for the first time outside of the large cities. The Association comes to Newport without solicitation on the part of the local physicians, and under favorable conditions the holding of the convention here will be likely to give the city a boom both as a winter and as a summer resort. To ensure the success of the convention the local committee, which includes all of the resident physicians, with Dr. Storer as chairman, is working earnestly and feels confident that the visitors will have no reason to regret their selection of Newport. It is possible that the City Council or a citizens' committee will assist in the entertainment of the visitors, Mayor Coggeshall having suggested such action to the City Council, in connection with the observance of the 250th anniversary of the settlement of the city.—*Newport News*, February 27.

**NEW YORK MEDICO-LEGAL SOCIETY TRANSACTIONS.**—The first edition of the volume of papers and addresses read before this Society, called Series No. 1, having been exhausted, it is proposed to issue a new edition. The volume will contain 600 pp., many papers of permanent value, and will be illustrated with portraits of several distinguished men. The price will be \$3 in muslin and \$2.25 in paper. Persons wishing to secure a copy should send their subscriptions to Mr. Clark Bell, No. 57 Broadway, New York.

#### LETTERS RECEIVED.

Dr. J. T. Biggerstaff, LaGro, Ind.; Dr. D. Duckett, Forrest, Ill.; Dr. D. R. Armitage, Muncie, Ind.; Dr. Jas. H. Buckner, Cincinnati, O.; Dr. A. J. Ritchie, Manawa, Wis.; Dr. W. M. Smith, Syracuse, N. Y.; Dr. J. H. Kellogg, Battle Creek, Mich.; Surgeon W. H. Long, U. S. M. H., Cincinnati, O.; Dr. Jas. M. French, Cincinnati, O.; Dr. W. Channing, Brookline, Mass.; Pennsylvania Company; E. J. C. Ellis, Chicago Medical College; M. P. Braunan, Chicago; M. D. Pelle and J. H. Schuck, Hospital College of Medicine, Louisville; B. E. Martin, Rush Medical College, Chicago; L. J. Pritzker and John Kercher, Chicago Medical College; A. E. Lawrence, Columbus Medical College; J. H. Chambers & Co., St. Louis, Mo.; Dr. A. B. Younkman, Brenen, Ind.; Fred. Stearns & Co., Detroit, Mich.; Victor Safe & Lock Co., Cincinnati, O.; A. J. Colton, Buffalo, N. Y.; Arthur F. Fischer, University of Michigan; N. A. Staley, Albany Medical College; J. H. Black, Philadelphia; Dr. M. L. Mayo, Huntington, W. Va.; P. Blakiston, Son & Co., Philadelphia; Frank P. Buffum, Rush Medical College; Dr. T. W. Kay, Baltimore, Md.; J. H. Bates & Co., New York; W. R. Ganger, University of Vermont; T. B. Waters, St. Louis Medical College; Dr. H. J. Holke, St. Louis; Dr. John P. Stoddard, Muskegon, Mich.; P. del Valle, University of Michigan; M. W. Everson, Jefferson Medical College; J. A. DuBois, Albany Medical College; A. B. Emery, Buffalo, N. Y.; Dr. D. M. Wick, New Hartford, Ia.; W. S. Cobb, West Stockbridge, Mass.; N. M. Geer, Port Huron, O.; Fred F. Price, Camden, N. J.; H. L. Schaefer and W. M. Yoekey, Chicago Medical College; Dr. A. J. Vance, Harrison, Ark.; G. C. Lyman, Burlington, Vt.; Geo. Ripley, Medical College of Indiana; John H. Egan and W. A. Levan, Jefferson Medical College; Dr. J. W. Kime, Ft. Dodge, Ia.; David A. Fitzgerald, New York; Dr. Wm. G. Parrish, Burlington, N. J.; Dr. T. S. Foster, Laconia, N. H.; Geo. W. Fitch, Washington, D. C.; Chas. F. Hitchcock, Syracuse, N. Y.; Dr. Henry O. Marcy, Boston, Mass.; W. P. Gillinghauer and A. J. Hocuss, Ann Arbor, Mich.; Geo. T. Head, Syracuse Medical College; Dr. Maris Gibson, Wilkesbarre, Pa.; P. S. Eustis, Chicago; Dr. D. W.

Overholdt, Columbus Junction, O.; Dr. J. F. McGarvey, Cloquet, Minn.; Dr. E. J. Doering, Chicago; Dr. John A. Terrell, Baltimore, Md.; Dr. W. H. Martin, Urbana, Ind.; Imperial Granum Co., New Haven, Conn.; Newport Aluminum & Steel Co., Newport Ky.; Dr. D. T. Gans, West Florence, O.; Dr. Jas. H. Buckner, Cincinnati, O.; Dr. T. T. Robertson, Winnsboro, S. C.; Dr. E. G. Proctor, Kane, Ill.; W. H. Schieffelin & Co., New York; Dr. C. W. Richardson, Washington, D. C.; G. R. White, New York; Warren A. Miles, Syracuse, N. Y.; Dr. M. A. Bailey, Jamestown, Pa.; F. C. Donald, Chicago; E. Merk, New York; Dr. A. L. Justice, El Paso, Tex.; Dr. Arthur J. Hall, Washington, D. C.; John G. Reed, Cincinnati, O.; Dr. Addinell Hewson, Philadelphia; Dr. Dudley Allen, Oberlin, O.; Dr. C. A. Rust, Saginaw, Mich.; Dr. H. J. Cowan, Danville, Ky.; J. A. Parks, Ann Arbor, Mich.; Dr. J. S. Updike, New York; Dauchy & Co., New York; Dr. C. F. Dutton, Cleveland, O.; Dr. Wm. B. Atkinson, Philadelphia; Dr. Wolfred Nelson, New York; Dr. Karl von Ruck, Winyah, S. C.; E. Steiger & Co., New York; Dr. S. T. McDermitt, Cowden, Ill.; Dr. Joseph Cummings, Evanston, Ill.; Dr. H. T. Montgomery, South Bend, Ind.; Dr. C. P. Tucker, New York; Plimpton Mfg. Co., Hartford, Conn.; Dr. John B. Roberts, Philadelphia, Pa.; Geo. H. Cattermole and L. H. Bacon, Ann Arbor, Mich.; W. S. Buchler, Philadelphia, Pa.; Dr. D. D. Bramble, Cincinnati, O.; Dr. J. A. Etheridge, Eatonton, Ga.; Northern Pacific Railroad Co.; F. J. Woiteshek, Ely, Ia.; Dr. D. I. Giärth, Altoona, Pa.; F. J. Fella, Toledo, O.; Dr. A. J. Brockett, Cleveland, O.; Dr. T. Smolsky, St. Petersburg, Russia; Dr. R. J. Dunglison, Philadelphia.

#### PAMPHLETS RECEIVED.

Bell, Clark. *Ninth Inaugural Address* as President of the Medico-Legal Society of New York. Reprint from Medico-Legal Journal.

Fifth and Sixth Annual Reports of the Board of Trustees and Superintendent of the State Lunatic Asylum, Little Rock, Ark.

Homan, Geo., M.D., Medical Examiner, St. Louis, Mo. *Reports of the Physical Condition of the Police Force of St. Louis, made to the Board of Police Commissioners.*

Tilden, G. H., M.D., Boston, Mass. *Transactions of the American Dermatological Association at its Twelfth Annual Meeting.*

*Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from March 2, 1889, to March 8, 1889.*

Major Warren Webster, Surgeon U. S. Army, retired from active service February 28, 1889. Par. 9, S. O. 50, A. G. O., March 1, 1889.

*Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending March 9, 1889.*

P. A. Surgeon E. H. Marsteller, detached from monitors at Richmond and wait orders.

P. A. Surgeon A. G. Cabell, detached from the Naval Hospital, Chelsea, Mass., and ordered to monitors at Richmond.

P. A. Surgeon Walter A. McClurg, promoted to rank of Surgeon.

Surgeon H. J. Babin, detached from the "Mohican," proceed home and wait orders.

Surgeon G. P. Bradley, ordered to the "Mohican."

Asst. Surgeon Geo. A. Lang, detached from the "Vermont" and ordered to the "Mohican."

#### SPECIAL NOTICE.

SECRETARIES OF MEDICAL COLLEGES, to whom circulars asking for information have been sent by THE JOURNAL, will please give their names and the titles of their colleges on returning the circular. Some circulars have been returned without any mark of identification.

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## ORIGINAL ARTICLES.

### CHRONIC BRIGHT'S DISEASE (ARTERIO-CAPILLARY FIBROSIS) IN ITS RELATIONS TO INSANITY.

BY E. A. CHRISTIAN, M.D.,

ASSISTANT PHYSICIAN TO EASTERN MICHIGAN ASYLUM,  
PONTIAC, MICHIGAN

Efforts to frame a satisfactory etiological classification of mental disease have been materially helped by a resort to a clinical grouping of cases. It has been recognized that where a wide variation exists in the causes assigned for the production of insanity in any given series of cases, among certain of them "groups of symptoms" are manifested which point to a definite constantly acting cause. "In many instances we know absolutely that such a cause exists. Even if we do not know that a specific cause is antecedent to the development of a certain form of disease, we are justified in inferring, where symptoms are identical, an identity of cause."<sup>1</sup> Acting upon this theory, it has been possible to frame a rational classification or "clinical grouping" that has simplified much that has hitherto been unsatisfactory and obscure. In spite, however, of the material assistance thus afforded, the lack of a definite pathological basis for perverted mental operations has been keenly felt by alienists.

That constitutional disease has been a comprehensive factor in the production of insanity has long been recognized. Many cases of mental disease manifesting similar symptoms, have fallen naturally into such a group. If it were possible to connect certain of these cases with a more definite pathological process, a step would undoubtedly be made towards simplifying our knowledge of the subject. We are led to believe from clinical observations, and from an interpretation of recent pathological researches in Bright's disease, that we may arrive at a material pathological basis in the classification and treatment of many cases of insanity which have hitherto been set down, rather vaguely, to disturbances of nutrition. When properly understood, it seems

likely that such a group may be made to include not only many that have already been classed under constitutional disease, but also many cases of the rheumatic, choreic and climacteric groups, as well as a goodly proportion of senile cases. The group under consideration will be found to include many suffering from alienation or impairment of mental faculties who have not possessed an especially unstable mental organization, nor an inherited tendency to mental disease. They may present simply a weakening of the faculties, or more violent perturbation, with controlling delusions systematized or unsystematized.

In the last annual report of the Government Hospital for the Insane at Washington, Dr. I. W. Blackburn, Special Pathologist for the Institution, presents in tabulated form the results of an examination of the kidneys in 263 cases of mental disease. Disregarding 104 cases, in which there was unmistakable increase of connective tissue, regarded by the author as "unimportant," we find 43 cases "in which the deviation from the normal was sufficient to constitute disease, including cases of *senile atrophy* of pathological degree." For present purposes the results are of little importance, in the absence of anything like a clinical history of the cases. Reference is made to them merely to call attention to the relative frequency with which Bright's disease occurs in insanity, either as an exciting cause, or as an accidental complication. Nearly one-sixth of his autopsies presented alterations "sufficient to constitute disease." It is reasonable to suppose that a respectable proportion of this one-sixth were cases in which the mental disease bore more than an accidental relation to the disease of the kidneys.

Out of a total of upwards of twenty-six hundred admissions to the Eastern Michigan Asylum, 37 cases have been collected in which the appearance of grave disturbances of nutrition have been co-incidental with the discovery of albumin and tube casts in the urine. In only about a dozen of these cases could it be said that the mental manifestations were not dependent upon or modified to some extent by the renal disorder. The intimacy of this connection can be better estimated when we come to consider the different ways in which the association may manifest

<sup>1</sup> Report of Eastern Michigan Asylum, 1882.

itself. The little that seems to have been written on the subject justifies the belief that the importance of the relation between Bright's disease and insanity has not been fully appreciated. Those articles which have come to the writer's notice have not embraced in their treatment of the subject the full extent of the connection between the two pathological processes. It has been treated as if mental disturbance could occur only as a uro-toxic consequence of impaired functional activity of the kidneys; losing sight of those cases in which both conditions may be regarded as an expression of a more widely diffused morbid process. If insanity with Bright's disease occurred only as a uræmic condition the rarity of such conditions would justify the little consideration that has been bestowed upon the subject.

The most recent ideas respecting the nature of Bright's disease, render it easy for us to accept the notion of an affection which rivals syphilis in the multiplicity of its manifestations, acting as an efficient factor in the production of insanity. Regarded as one of the symptoms of the constitutional affection, the mental derangement is as easily accepted as the persistent vomiting, the diarrhoea, or the rarer complications, like chorea and other purely nervous disturbances, mentioned by recognized authorities as occurring in this disease, more especially in the cirrhotic form.

Although pathologists are not agreed as to the seat of the primary lesion in chronic Bright's disease, it is no longer regarded as existing altogether in the renal structure. A brief review of the evolution of present accepted theories concerning its pathology, will help us, I think, in arriving at an understanding of the extent of the relation which may exist between this affection and many cases of mental derangement. Within the past year two contributions to the subject of chronic Bright's disease have appeared which must command attention, not only on account of the prominence of the authors, but also because of the advanced theories presented therein, founded as they are upon original pathological research. The first of these was the Middleton Goldsmith lecture delivered April 18, 1888, by Dr. J. M. Da Costa, on "The Relation of the Diseases of the Kidney, especially the Bright's Diseases, to Diseases of the Heart." The other was a paper read before the College of Physicians in Philadelphia, in June, 1888, by Dr. Arthur V. Meigs, entitled "A Study of the Arteries and Veins in Bright's Disease."

The recognition of increased arterial tension with hypertrophy of the left ventricle was the first fact which tended to place the subject upon a more definite pathological foundation. To account for these vascular changes different theories were advanced, summarized by Dr. Da Costa as follows:

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matter stimulates the action of the heart, leading to its hypertrophy, and that impure blood requires greater force of ventricular contraction to force it through unwilling vessels. This was the view of Bright. A second view (Traube) took account of impurities in the blood, but located the obstruction to the flow, in the vessels of the kidney. A third view (Johnson) suggested that the arterioles refuse to receive altered blood, and that in consequence of their resistance, the *muscular* coats hypertrophy, with consequent hypertrophy of the heart. A fourth explanation asserted a fibroid over-growth of the *outer coats*. While any one or all of these were sufficient to account for the hypertrophy of the heart, they were only suggestive of the probable nature of the disease. When next it was observed that in many cases there was clinical evidence that disease of the heart had preceded the detection of the disease of the kidney, it was thought that congestion of certain internal organs, especially of the kidneys, was dependent upon the former trouble. Finally the demonstration by Gull and Sutton, in 1877, that many cases which had previously been called Bright's disease of the kidney, were, in fact, "due solely to changes having their origin in the arterioles and capillaries, and in the connective tissue in which they lie," led to the abandonment of the idea that the diseased process was a disease of the *kidney*.

The present state of knowledge of chronic Bright's disease is summarized by Dr. Meigs as follows: 1, In cases of albuminuria certain changes take place in the kidney, with which there is commonly associated enlargement of the heart, and sometimes atheroma of the arteries; 2, other changes of a degenerative and atrophic type are found in various organs and tissues of the body, namely, diseases of the cerebral arteries and of the arteries and substance of the spinal cord—described by Gull and Sutton in their paper on "Changes in the Spinal Cord and its Vessels in Arterio-Capillary Fibrosis"—emphysema and slow inflammatory processes in the lung, changes in the heart valves, degeneration of the coronary arteries and of the muscular tissue of the heart, diseases of the liver and the spleen. To account for such wide-spread changes, two schools have arisen; one assuming that the disorder is primarily a blood disease manifesting itself first in alterations in the secreting surface of the kidney; the other maintaining that it has its origin in the adventitia of the arterioles and in the capillaries and perivascular connective tissue.

The late Dr. Fothergill, in his work "Vaso-Renal Change vs. Bright's Disease," attempted to harmonize these views by elaborating a theory of *atavism*, or a reversion to the uric acid formation of lower forms of life, by virtue of which the solubility, and hence, the elimination of excre-

mentitious products, are interfered with. The irritation due to continuous circulation of such toxic matter in the blood results in hyperplasia of the vascular coats, weakening of their walls, and narrowing of the caliber of the vessels.

Influenced by the belief that the pathological process was primarily in the vascular system, Dr. Meigs made an examination of the veins and arteries in a number of cases presenting the complex of symptoms known as chronic Bright's disease. As a result of his investigations he finds himself able to predict with considerable accuracy that, in addition to the well-known lesions of the heart and kidneys, he will find after death other widely diffused changes. In sections for the microscope from almost every organ, including the brain and spinal cord, he has found an irregular over-growth and thickening of the *intima* of the *arterioles*. He has come to attach little importance to signs which are usually relied upon, almost to the exclusion of everything else, to establish the diagnosis. While the presence in the urine of albumin with casts is positive evidence of the disease, the absence of one or the other does not negative the diagnosis. In one of his cases, in which aortic regurgitation had made its appearance late in life as the result of calcification of the valves, death came on gradually in consequence of heart failure, without dropsy or other symptoms pointing to an involvement of the kidneys, except a trace of albumin without casts when the patient first came under treatment. Microscopical examination after death revealed atheromatous and fibroid alterations in the vessels, and parenchymatous changes in the kidney, with casts in the tubules. He cites also another case in which the autopsy verified the diagnosis, where casts were never found in the urine, although albumin was constantly present.

Da Costa, in his paper referred to above, analyzes 127 cases of valvular disease of the heart, and finds among them only eight cases in which any true affection of the kidney followed the disease of the heart—not one of true contracted kidney—from which he concludes that valvular disease of the heart rarely leads to chronic disease of the kidney. On the other hand, from an analysis of 121 cases of renal disease with concurrent heart disease, it becomes apparent that the character of the kidney affection in the vast majority of cases is that of the contracted kidney. He concludes that "the ordinary valvular affections in the Bright's diseases are the result of the altered tissue-nutrition of the valves, and of the degenerative changes which take place there, as they take place in the large and small vessels of the body. They are favored to a greater or less degree by the morbid products which, from want of proper elimination on the part of the kidneys, circulate in the blood. It may also be a question whether, in part at least, the altered nutrition of the

valves may not be due to affections of their nervous supply." He goes on to say that while degenerative changes are favored by age, yet age is not the important factor it appears at first sight to be. He has been led to his conclusions by the results of investigations into the condition of the ganglionic nervous system. He has found changes in the cells of a degenerative character sufficient, in his opinion, to account for the vascular changes and for the cardiac hypertrophy. He also admits, with Meigs, thickening of the *intima*, but the primary pathological condition he believes to be in the wasting of the cells of the sympathetic ganglia. This theory, I believe, finds clinical support in those cases in which a patient in his usual health is suddenly overwhelmed by a fatal cedema of the lungs, a rational explanation for which lies in vaso-motor paralysis.

Here, then we have a picture of a disease so generally diffused, that no organ of the body may be said to be exempt from sharing to a greater or less extent in the derangement which may be set up. I am aware that more positive evidence in the form of microscopical examination of the brain substance is necessary to establish the conclusions which I would draw. It should be borne in mind, however, that it is with precisely such cases as we are now dealing that this evidence is most likely to be lacking. Many of them are cases in which the mental disorder has been regarded as a functional disturbance, and whose symptoms are least suggestive of histological changes, and hence, least likely to stimulate to such investigations. It would seem, also, that mental manifestations would be limited to that form of Bright's disease treated of especially by Meigs and Da Costa; but we are little concerned with the nomenclature of Bright's disease, if, as Millard says, "all inflammatory conditions of the kidney arise as a matter of course from the vascular apparatus of the connective tissue."

The same sets of causes commonly recognized as productive of insanity in general, are no less efficient when acting through the medium of such an affection. Dr. Tyson speaks of "mental anxiety, whether the result of grief or of business and financial cares," as among the possible causes in the production of Bright's disease. All authors recognize prolonged mental tension, of whatever kind, as a frequent cause. Adding to this the gradual development of structural changes, whether as an "arterio-capillary fibrosis," or as an increase of connective tissue in the kidney interfering with the elimination of deleterious matter or as both combined, the subsequent appearance of altered mental phenomena is understood with little difficulty, and all the more readily, if we can accept Da Costa's theory of the disease originating in a starvation of the cells of the sympathetic ganglia.

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The most recent ideas respecting the nature of Bright's disease, render it easy for us to accept the notion of an affection which rivals syphilis in the multiplicity of its manifestations, acting as an efficient factor in the production of insanity. Regarded as one of the symptoms of the constitutional affection, the mental derangement is as easily accepted as the persistent vomiting, the diarrhoea, or the rarer complications, like chorea and other purely nervous disturbances, mentioned by recognized authorities as occurring in this disease, more especially in the cirrhotic form.

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tion of nitrogenized food, or an unaccustomed amount of exercise, or both together, the system becomes suddenly overwhelmed. It is obvious that the kidneys of such a person will be least likely to present gross structural changes.

In the following case there can be no reasonable doubt of the dependence of the mental disorder upon the renal disease, or of death resulting from uræmia: A retired capitalist, 81 years of age, well preserved, of temperate habits, and without inherited taint, began to fail in mind eighteen months prior to his admission to the asylum. He became restless, irritable towards members of his family, and unwilling to remain at home. At first he had delusions of extravagance. To these there succeeded, later, periods of noisy excitement lasting for several days, during which he feared robbery and personal injury. Chronic Bright's disease had been diagnosed by his medical attendant a year previous to his coming to the asylum. At the time of his admission he weighed in the neighborhood of 200 pounds. There was no evidence of arterial degeneration, but his pulse was full and slow, and the left ventricle was manifestly hypertrophied. His pupils were contracted, and the urine contained albumin and casts. His delusions gradually lost form and were replaced by confusion of ideas. Later, recurring attacks of vomiting were followed by loss of appetite and flesh. Attacks of dyspnœa occurred occasionally, sometimes attended with expectoration of blood. Slight pitting of the ankles occurred towards the last. This patient finally died in a coma, which persisted through five days.

More frequently the mental symptoms do not suggest uræmic intoxication as much as a general lowering of the nutritive processes. The brain, with other organs, feels the lack of a healthy blood supply. Such cases are apt to accompany or follow a train of dyspeptic symptoms. The patients become low-spirited; sustained mental effort and the pursuit of the ordinary avocations are impossible; the mind dwells upon the bodily symptoms, and confirmed hypochondriasis results. If delusions develop, they are usually confined to groundless ideas of suspicion of friends, or to ideas of personal unworthiness.

As illustrative of chronic Bright's disease associated with this type of mental trouble, the following cases are reproduced from the last biennial report of the Eastern Michigan Asylum: A male, æt. 45; no hereditary tendency to mental disease; had been a temperate man, but there was a history of dyspeptic troubles dating back many years. During the fall preceding his admission he had become peculiar, forgetful and confused. Later, he was nervous and hypochondriacal, and in the winter developed religious delusions, associated with ideas of a self-condemnatory character, and became suspicious

of the different members of his family. He was finally brought to the asylum, partly in accordance with his own wishes, with some appreciation of his condition. He had complained of failing vision for two months. Upon admission he seemed reduced physically. Pulse 102, and weak. He continued despondent and hypochondriacal, and was at times distressed by his delusions. Casts and albumin were present in his urine from the first. On several occasions he experienced seizures which were regarded as of uræmic origin; complained also of seeing balls of fire. After one of his seizures his attendants thought he was dead, and resorted to artificial respiration to restore him. He remained confused and more or less insensible to his surroundings during the rest of the day, and on recovery, articulation was noticed to be very indistinct. Bed-sores developed, and towards the last suppression of urine occurred. Diarrhœa was a troublesome feature. He died semi-comatose four months after admission.

A female, æt. 57. Family history good. Patient was naturally of active habits, cheerful and amiable. Mental failure followed close upon a continued fever of some sort, two years and a half previous to admission to the asylum. Health had never been good since. Mental peculiarities were at first confined to causeless worrying about her children. Later, she became profoundly depressed and labored under delusions of suspicion of those about her. When admitted she was in feeble bodily health. Lower extremities were extremely œdematous, and urine contained albumin and casts. There was present as an almost constant symptom a considerable degree of bronchial irritation. There was persistent cough, with paroxysmal seizures of an asthmatic character. She became very asthenic, and finally died, as the result of pleural effusion, four months after her admission.

While the assumption of a uræmic origin seems the most natural explanation for many of the symptoms in the foregoing class of cases, there are other cases in which the prominent symptoms are manifestly of vascular origin. In the writer's experience this class has been the more numerous. In a paper read before the meeting of the American Neurological Association, in 1888, on "The Relation of Renal Diseases to Diseases of the Nervous System," Dr. Robert T. Edes belittles the importance of uræmia as an element in any of these cases. He denies that symptoms generally associated with acute and chronic Bright's disease, such as headache, sensory disturbances, dyspnœa, paralyses, neuralgia, itching, eruptions, etc., are uro-toxic. On the other hand, since many of the typical "uræmic" symptoms are wanting in these cases of insanity, he concludes that interference with the eliminating functions of the kidneys is not sufficient to account for all

the symptoms presented. He calls attention to the fact that so-called attacks of uræmia, in the midst of apparent health, are most common in the interstitial variety of Bright's disease, where the vascular element in the disease (by which he means high arterial tension, associated with hypertrophy of the left ventricle) is most common; and not that form in which the epithelium is chiefly involved. It must be borne prominently in mind that the disease, as described in the researches of Meigs and DaCosta, is primarily vascular, with secondary changes in other organs, of which the kidney lesion is but one. Not all patients suffering from this vascular fibrosis manifest mental perturbation, for the same reason that all do not present casts in their urine. As the changes are more advanced in one or the other organ, so will the functions of that organ be the more interfered with. In some of the cases which have come under observation the symptoms have at first suggested a possible organic brain disease, and have borne no slight resemblance to paralytic dementia. Delusions of an extravagant type have been met with occasionally. In a number of cases of mental decay following paralysis, there can be little doubt that the cerebral lesion was but an incident in the vascular changes of the Bright's disease. Dr. Edes dwells upon attacks of paralysis appearing a short time before death. He demonstrates, I think, that a rise in tension in the blood-vessels of the brain, either from spasm of the walls of the vessels, or from the violence of the impulse of the hypertrophied heart, is more likely to be the cause, than a sudden diminution in the amount of matter excreted by the kidneys. If instead of a localized œdema, with subsequent reabsorption of the effusion and disappearance of the motor disability, a rupture of the vascular coats occurs, there results a lesion of which vestiges remain during the entire subsequent progress of the disease. It is not unlikely that further investigations will enable us to include a larger number of cases of "dementia with paralysis" in this class. The three following cases are cited to illustrate this point:

A male, æt. 45. Father said to have died of paralysis. He was an industrious and hardworking man, and had attempted to manage a farm during the daytime and to carry on his trade (that of a shoemaker) at night. Two years previous to his admission he was stricken with left hemiplegia. Mental failure dated from this attack. He lost judgment, became confused, and developed delusions of suspicion. At the time of his admission to the Asylum there was marked arterial tension, with increase in the area of precordial dulness. During his stay in the Asylum many of his symptoms strongly suggested paresis. There was thickness of articulation and much muscular incoördination. Frequently occurring attacks of diarrhœa were a troublesome feature. Towards

the latter part of his life he became very dropsical. Albumin and casts were found in his urine. He finally died in consequence of a pleural effusion, not quite four years after his admission to the Asylum. A post-mortem examination showed both kidneys to be atrophied and cystic. The heart, otherwise healthy, was enormously hypertrophied—weighing 22 ozs.

A male, æt. 65, a sailor; was known to have been licentious and intemperate, although no history of specific infection was obtainable. He was first admitted to a United States Marine Hospital, suffering from the effects of a left hemiplegia. His mental condition rendered it impossible to obtain from him any information as to the duration of the paralysis. During the six months of his stay in this Government Hospital he demented rapidly, becoming finally so restless and noisy as to render his transfer to the Asylum necessary. At the time of his admission his arteries were in an advanced stage of atheromatous degeneration. There were contractures and wasting of both the arm and leg on the left side. He was at first unable to express himself, but later he improved so as to make his wants known, and acquired a fair appreciation of his surroundings. His vision, which was imperfect from the start, failed progressively. He repeatedly sustained "seizures" marked by sudden and complete loss of consciousness, without accompanying interference with the heart's action. His attacks were accompanied by vomiting, but never by convulsions. Later, diarrhœa became a troublesome feature. Bed-sores developed, emaciation progressed, and vision became nearly abolished. His urine contained albumin in moderate amount and granular casts in abundance. He finally died in coma, nine months after coming to the Asylum.

The third case occurred in a man of exemplary habits, and without any inherited tendency to mental trouble. A little over two years prior to his admission to the Asylum he suffered an attack of paralysis. According to the account given by his physician he fell from his chair and remained unconscious for eighteen hours. The attack was accompanied by slight convulsions during the first few hours. There were stertorous breathing and great congestion of the head and face. Twice afterwards he had a similar attack; the last time six weeks previous to his admission to the Asylum. The last two attacks were similar to the first, but without convulsions or loss of consciousness. The paralysis does not seem to have been strictly limited to either side. His mind commenced to fail shortly after the first attack, and progressed rapidly during the interval between the last attack and his admission to the Asylum. His mental symptoms were chiefly those indicative of decay of the mental powers. Delusions were not present at any time. At the time of his admission to the Asylum he weighed 193 lbs., and presented

the appearance of being well nourished. There was marked arterial tension, with increase of the area of precordial dullness. No heart murmurs; no evidence of atheromatous degeneration; pupils normal; vision very imperfect, and could not be remedied by glasses. His gait was very paretic—equally so on both sides, and hand pressure was greatly diminished. There was some anæsthesia. The urine contained albumin and a few small hyaline casts. Dropsy was never present, even in small amount. His stay in the Asylum was marked by no special mental symptoms, occasional attacks of bewilderment being the most prominent mental manifestations. Less than a month following his admission a sudden œdema of the lungs overwhelmed him, and he died, within two hours, of suffocation. This œdema of the lungs was accompanied by several profuse watery discharges from the bowels. For several days previous to his death he had complained of constant and severe headache. He had become accustomed to brief attacks of dyspnoea coming on after rising in the morning.

"Insanity of Bright's disease" is not meant to designate a new form of mental disease. However, as indicating a probable origin of many cases hitherto not fully understood, it is an admissible term. It offers indications for temporary relief, establishes a prognosis in certain cases which, but for the presence of albumin and casts, might offer delusive hopes, and provides an explanation for the persistent downward course of many cases which have the outward appearance of uncomplicated cases of melancholia.

In conclusion, I present a brief summary of what I have attempted to consider in the foregoing pages.

1. The frequency with which evidences of chronic Bright's disease are found associated with mental derangement leads to the belief that the latter condition is often dependent upon the former as its cause.

2. This belief finds support and explanation in the present accepted ideas of the pathology of chronic Bright's disease, according to which the disease is no longer regarded as confined to the kidneys, but as possessing features which make it essentially vascular. These consist in structural alterations in the blood-vessels of the brain and spinal cord, as well as in the vessels of other organs of the body.

3. There are cases of insanity with chronic Bright's disease which are of uro-toxic origin, but in the majority of cases the mental manifestations must be regarded either as an expression of lowered nutrition or, as is more frequently the case, due to vascular changes in the brain, attended often by convulsions of other than uræmic origin; disturbances of speech and of locomotion.

4. Finally, in many cases of dementia with paralysis it will be found that the destructive brain

lesion, with subsequent decay of the mental faculties, is the result of an alteration in the vascular coats of the brain, coexistent with an hypertrophied heart, and with structural changes in the kidneys.

## ON THE MICROSCOPICAL DIAGNOSIS OF CANCER.

*Read before the Medical Society of the District of Columbia,  
November 23, 1888.*

BY EDWD. M. SCHAEFFER, M.D.,  
WASHINGTON, D. C.

Cancer is a disease which is, unfortunately, but too common in all parts of the world; and whether, as some have asserted, there is a higher percentage of deaths from this cause in the District of Columbia and the adjoining States than elsewhere, or whether there is a tendency of these cases to gravitate hither from other portions of the country, certain it is, that the records of our Society, as well as the vital statistics of the District, show that we have at least our full proportion of deaths from this disease. To the theories as to its cause I shall but briefly refer, leaving also the practical subject of treatment to the physician and the surgeon.

A somewhat particular study of morbid growths, extending over upwards of twenty years, and observations founded on many microscopical examinations, as well as such clinical notes as I have recorded in my note-books, wherever such were obtainable, would seem, however, a sufficient basis upon which to offer some practical points which may be of advantage to the general practitioners, as well as to the surgeons included in the membership of our Society.

The minute structure of malignant growths has always attracted the attention of the most eminent pathologists, ever since the improvement of the microscope has enabled them to be studied under a magnifying power sufficiently strong to give those details of cellular structure on which their classification in modern pathology is founded. To a certain extent this classification has given us results in harmony with the clinical history of such growths, and been of practical use to the physician, whom it enlightens on obscure cases of internal growths, often enabling him to make a correct diagnosis when other signs fail, in such cases as afford an opportunity for the study of the morbid products expelled by the natural outlets of the body. When these chances do not occur, it is but too often, it must be admitted, that it only proves of *post mortem* benefit to the patient and his friends, in ascertaining after death the exact nature of the disease. Even here the aid of the microscope is frequently invoked, and clears up many otherwise doubtful cases of diagnosis where the unaided vision would leave the case in uncertainty, and the practical advantage

in the diagnosis of future cases presenting similar symptoms is not small.

In the majority of cases of external cancer of pronounced types, and especially in epithelioma, we are able to make the diagnosis with much precision, and a prognosis based upon such results is of a high degree of certainty. The surgeon is encouraged to act boldly where an operation is practicable, and the patient is induced to submit to an operation the arguments in favor of which might otherwise fail to carry conviction.

But there are some forms of morbid growth resembling in some particulars malignant disease in structure, where the natural history is widely different from that of the true malignant types, and in spite of the elaborately illustrated works on the subject, the physician will frequently come across forms not distinctly referable to any of the classified types. This is to be expected, because we now know that cancer is not, as was formerly supposed, an entirely foreign and separate entity, having its seat among the healthy tissues of the body, from which it draws nourishment while it destroys them, but rather the cellular manifestation of certain modifications produced in previously normal tissue by a process of disease not apparently governed by such well-defined and definite laws as would lead us to expect uniformly similar results in similar growths observed in different cases.

The possible production of cancer by a minute parasitic form of a vegetable nature has recently been again discussed, and though the omnipresent microbe has not yet been traced to its lurking-place in this disease, there is much plausibility in the theory of such an origin for benign as well as malignant growths.

The curious distortions of leaves, flowers, and other parts of the plant under the irritating influence of insect punctures, and the tumors and hypertrophies of limbs of trees and shrubs evidently due to extraneous causes at first, cannot fail to suggest to the student of nature a certain analogy to similar distortions in the animal structure, which, while it may be fanciful, is possibly a suggestion of a somewhat similar cause in both, modified in its results in the animal by its differing and more highly organized systems of nutrition and growth.

As far back as 1854, a member of the Royal Microscopical Society of England, Mr. Jabez Hogg, in his work on the microscope, expressed a belief in the "fungoid origin of cancer." But taking our knowledge of the structure of cancer as it stands, the question arises whether, in spite of the acknowledged ability of the microscope to distinguish its principal types, the surgeon is using that instrument to the extent of its power in diagnosis. Whether in fact, disgusted by a few contradictory results, he is not inclined to consign it to the category of wholly unreliable tests? While

but few are willing to put themselves on record to this effect, the less guarded private utterances of some of our own members would seem to indicate such an opinion.

Let me briefly advert to the causes which I believe have induced this mental attitude on the part of some members of the profession. In the first place, as some one (Huxley, I believe), has remarked, the value of microscopical observations depends much more on the quantity and quality of cerebral tissue *behind* the visual organ of the observer, than it does upon the excellence of the lenses *in front* of that expressive feature. Some men seem never able to acquire the faculty of intelligent and discriminating observation. But this should no more discredit true microscopical work than the erroneous observations of early writers in ascribing certain diseases to microscopical germs, as malarial fever to the Palmella, for instance, should be used as an argument for the fallaciousness of all later work by other observers in the same direction. And it would be illogical for the surgeon to take the ground that because the electrical indicator gave erroneous results in the localization of a metallic missile in the case of President Garfield, therefore all future appliances of electricity as a guide to the surgeon in doubtful cases should be condemned.

Really good observers are sometimes overawed, as it were, by a previously announced diagnosis by men of high reputation, to the extent of modifying their own observations to accord with the weight of opinion among those who have viewed the case from an entirely different standpoint. The result is apt to be a sort of composite opinion, from which all true original judgment has been eliminated. But I take it to be the function of the microscopical observer, when appealed to in doubtful cases, to ignore all collateral evidence as much as possible, and pronounce an opinion independently of any other considerations on the case before him. Whenever I have allowed myself to be thus biased it has subsequently proved that my judgment would have possessed more value if entirely free from such influences, and it has been my habit for years, when called on to examine a case of suspected disease, whether cancer or other morbid process, to request that all information as to the case be withheld until I have written my opinion. Another advantage of this method is, that whereas the human memory is often treacherous, the *littera scripta manet*, and the possession of written copies of all opinions, has been of value in case the loss of the copy given the patient or his medical adviser might lead to dispute as to what such original opinion had been. After this has been done I endeavor to obtain for my notebook all points of peculiar interest in the case, and the final result whenever practicable.

I have in my cabinet sections of a thickened band of the mucous layer of the rectum in a case

in which the patient had procured the opinions of eminent surgeons in this city and New York. The identical piece from which my sections were made had been examined microscopically by different pathologists, and pronounced epithelial cancer. One of the observers who gave this opinion was the author of a valuable work on the diseases of the rectum. Yet this was a case where a thorough acquaintance with the normal structure of the part seemed to justify my opinion given in writing to the patient, that there was not a single spot in the section which could not be duplicated from a section of the normal rectum, a hypertrophy and somewhat abnormal position of the mucous follicles of the past having however produced in the sections an appearance somewhat resembling certain forms of glandular neoplasm, but certainly *not* the structure of epithelioma. The sections on which I based my judgment were, some of them, submitted by the patient to several expert microscopical diagnosticians in Baltimore and elsewhere, who without being informed of my opinion already given, coincided in their judgment of the case with the view taken by me. Had I been previously acquainted with the array of surgical talent that had pronounced the case one of cancer I might have been frightened out of my diagnosis, yet the patient, who had no doubt for some time carried the growth which was first submitted to me in April, 1886, has since been perfectly restored to health, after a not radical operation by electricity as I have been informed, and when last heard from had experienced no return of the growth.

This case serves to illustrate the importance of another requisite in microscopical diagnosis, for want of which the best powers of observation and the most cultivated judgment will sometimes fail, viz., a sufficient experience not only with morbid growths, but with all the normal tissues of the body. No one can be reliable as a pathologist in the study of the more evident changes which the unaided eye detects in disease, unless familiar with all the variations in health. This seems a truism, yet it is apt to be lost sight of in the applications of the microscope. A section through a Paccinian or tactile body in the finger of an infant, perfectly normal, was once submitted without remark to a microscopist, who unhesitatingly pronounced it to be epithelioma. Yet, the gentleman whose more particularly pathological studies led him to pronounce this opinion, was an eminent observer, so eminent that the ingenious youth who had interrogated him, being an official subordinate, was afraid to inform him of his error, and he never consequently derived the due benefit from that object lesson.

Besides a knowledge of normal tissues, the observer should be familiar with the changes produced by simple inflammation, hypertrophy, lesions of particular diseases, such as syphilis,

etc. An acquaintance with the modifications due to chemical re-agents is sometimes useful, as well as considerable experience with vegetable and other extraneous structures, when discharges supposed to be from the bladder, uterus, etc., are searched for indications of cancer. Altered membranes and clots from the uterus are often of a very puzzling description, and without much familiarity with these discharges serious error may arise.

A rock on which many observers are wrecked is the improper selection by the surgeon of the portion of tissue to be examined. For fear of taking too much tissue, a small piece may be excised which on examination will show the effects of inflammatory induration, or hypertrophy of the part such as commonly occurs in the neighborhood of malignant growths and yet no true cancerous structure be included. The diagnosis is correctly made, but upon imperfect data, and the result is that the microscope, in common parlance, gets "a black eye" as an instrument of accuracy in diagnosis. In other instances a growth which in its initial stage has not fully attained the structure of carcinoma, if not removed, may subsequently proceed to develop its typical character and a diagnosis founded on an early examination be thus discredited.

In conclusion I will briefly relate a case of peculiar interest to me, in which at the first examination of the patient's urine I made the diagnosis of cancer, which has since been confirmed by the subsequent history and an autopsy.

A man, about 60 years old, was sent to me May 4, 1888, by Dr. N. S. Lincoln, for the purpose of having an examination of his urine. Patient was tall, dark complexioned, rather sallow but not cachectic in appearance, said he had pain in his back. Had not yet been examined by Dr. Lincoln, who wished to learn the condition of his urine he said. He sent for report the same afternoon, but it was not completed. The report sent to Dr. Lincoln was as follows:

*Anal.* 3720. May 4, 1888.—Color of urine natural, nearly clear, moderate amount of deposit, of a whitish flocculent character, moderately acid, spec. grav. 1.014. Quantity in twenty-four hours not stated, but patient had observed no change in that respect of late. Albumin about one-half of volume when coagulated. No excess of phosphates, no sugar, urea not below normal average per oz. *Microscopical examinations:* No casts. No fresh blood, but shreds of fibrin (from blood-clot?). The deposit contained a large proportion of pus, and epithelium from the bladder, and also numbers of large, many-nucleated cells, *not normal*. No crystalline sediment.

In a note to Dr. Lincoln accompanying the report I said: "As this patient was apparently very anxious about his case and might want to see the report of analysis, I write you separately in order

not to needlessly alarm him, to say that there is no doubt in my mind as to the character of the many-nucleated cells, viz., that they are typical cancer-cells. If any small clots are observed in his water, it might be well to have him drop them into weak spirits and let you see them."

May 10, 1888. *To Dr. Lincoln*: "I gave Mr. J.'s son the result of the second analysis in his father's case, and see no reason from the microscopical appearances in this analysis to change the opinion of the case formed at first. Absence of local pain and hæmorrhage may indicate a favorable form or early stage of the growth, if one exists."

The case progressed and I made frequent examinations of the urine up to July 18th. The albumin was always found, but diminished in amount ultimately. The color was for some time natural, and no clots or increased deposit to attract the eye, at first, but subsequently the urine became turbid, and the deposit more abundant, and pinkish in color, and toward the last a few blood corpuscles appeared. No casts were found at any time. The urea gradually fell below normal average. The many-nucleated cells were at first all separate and distinct, but in Analysis 3818, July 16th, they were also found in small continuous fragments of tissue, the largest of which were distinctly visible to the naked eye. Death occurred on the 3d of November, and an autopsy was made by Dr. D. S. Lamb.

[The right kidney was found, at the autopsy, to be converted into a cancerous mass, which under the microscope showed the structure of epithelioma.]

## A CASE OF PERITYPHLITIS.

*Read before the Medical Society of the District of Columbia,  
December 12, 1888.*

BY T. E. MCARDLE, A.M., M.D.,  
OF WASHINGTON, D. C.

T. K., male, white, æt. 34 years, consulted me at my office on the evening of November 15, 1888. He complained of general malaise, with localized pain in the lower part of the abdomen towards the right side. He had a short, harassing cough. His bowels had been freely moved from some purgative pills taken the previous night. His pulse was 100, temperature 102.6°. I ordered him home and to bed at once and prescribed codeia and quinine, together with a strict liquid diet.

On the following morning (November 16), I found that he had passed a very comfortable night. A thorough examination revealed a tumor in the right inguinal region. The pulse was 80 and the temperature 100° F. Poultices were ordered. When I saw the patient again in the evening his pulse was 100 and his temperature 102°.

On the morning of the 17th Dr. J. Ford Thompson saw the patient with me. He had enjoyed a

fairly good night and his bowels had moved naturally. The pulse was 100 and the temperature 101°. Pus easily detected. Poultices continued. Evening pulse 110, temperature 103°. On the morning of the 18th the pulse was 100 and the temperature 101°; the patient had passed a comfortable night.

Chloroform was given and laparotomy performed. After the evacuation of the pus, a drainage tube was introduced and the wound was dressed antiseptically. The patient took the anæsthetic badly; the nausea was distressing and the vomiting continued until 3 or 4 o'clock in the afternoon. At 9 o'clock in the evening, when I saw him, his pulse was 100 and his temperature 97.4°. I gave him some whisky and water, which he immediately vomited, together with a quantity of dark-green fluid. A hypodermatic injection of morphia  $\frac{1}{4}$  gr. and atropia  $\frac{1}{150}$  gr. was administered. He spent a very restless night and vomited at midnight after taking a pill of morphia gr.  $\frac{1}{4}$  and atropia gr.  $\frac{1}{150}$ . The fluid was not dark as before. At 10 in the morning the wound was syringed with a carbolic solution, the drainage tube removed, an iodoform tent substituted, and the wound redressed antiseptically. Champagne, milk and lime-water were ordered. Pulse 100, temperature 97.4°.

At 5 in the afternoon the pulse was 96 and the temperature 98.6°. As he had vomited the champagne twice its use was discontinued. At 10 in the evening his pulse was 96, temperature 99.4° in the axilla. He had vomited at 8 o'clock. Suffered from hiccough and had been slightly delirious.

The wound was again syringed on the morning of the 20th and found to be cleaner than on the preceding day. The pulse was 76, the temperature 97.8°. He had had a bad night, as the vomiting and hiccough had continued. He was now better and able to retain a small quantity of champagne. Poultices were ordered. In the afternoon the pulse was 100 and the temperature 99.6°. The wound was syringed and found to be cleaner. An iodoform pad was applied and the poultices were continued. A suppository of morphia gr.  $\frac{1}{4}$  and belladonna ext. gr.  $\frac{1}{6}$  was ordered.

At 10 P.M. I found that the patient had vomited before using the suppository, but not since. Meanwhile he had slept three hours. He felt much better. His pulse was 88, temperature 98.4°. The iodoform gauze was changed, another suppository ordered, and the poultices renewed. He slept well during the night, but vomited clear fluid at 7 in the morning. At 10 o'clock the pulse was 86, the temperature 97.6°. The wound was cleansed and dressed, and the poultices were continued. A bottle of citrate of magnesia was ordered to be taken in four doses at intervals of an hour each. He retained the first two doses but vomited the others. Whilst I was at his bedside at 5 o'clock in the afternoon he vomited a



pint of greenish fluid. The wound was cleansed and dressed. Two enemata were given by me, bringing away some small hard lumps of fecal matter. He spent a very bad, restless night, and vomited many times. He had another small movement, hard and lumpy.

At 10 A.M. his pulse was 88, temperature 99°. The wound was syringed and the poultices were continued. Three suppositories had been used during the night without producing sleep. A grain of calomel was ordered every two hours until 3 grains were taken.

At 5 in the afternoon the pulse was 92 and the temperature 99.8°. The wound was again syringed; there was very little discharge. He had vomited frequently, twice while I was in the room. The fluid was large in quantity, yellowish-green in color, and bad-smelling. There had been no movement from the bowels, though all the powders had been taken. I washed out the rectum three times with some effect.

At 10 P.M. the pulse was 98 and the temperature 99.4°. The patient had vomited six times, and his bowels had been moved twice. The odor was horribly fetid. A suppository every three hours was ordered. The patient was restless until 2 A.M.; has not vomited since that time. Has had two bad-smelling movements.

At 10 o'clock the wound was cleansed and but little discharge found. Pulse 90, temperature 99.4°.

At 5 P.M. the wound was again syringed. The abdomen was softer, though there was some slight pain on the left side. Slight nausea, but no vomiting since morning. Poultices continued and suppository ordered at 8 P.M. After a good night's rest the wound was syringed at 10 in the morning, and the poultices were stopped. No nausea, but hunger. Takes plenty of nourishment. Pulse 84, temperature 98.6°.

At 5 o'clock the pulse was 100 and the temperature 99°. The patient spent a very comfortable day. A suppository was ordered at night and the patient slept well. The next morning, however, he felt oppressed and suffered from flatus. He had doubtless taken too much food. Ordered poultices to be applied and aromatic spirits of ammonia to be taken in teaspoonful doses. Pulse 80, temperature 97.8°. He spent a restless day; vomited five or six times; had a movement at 4:30 o'clock. He had taken very little nourishment during the day, so I ordered liquid bread. At 6 in the evening his pulse was 84, temperature 99.8°.

Although three suppositories were given him, he spent a bad night and slept but little. He had four dark fetid movements from the bowels and vomited eight times. He began to improve at 4 A.M., and now relished his liquid bread.

His pulse was 100 and his temperature 99.8° at 10 in the morning. The wound was cleansed and found to be filling up from the bottom. His bow-

els were moved twice during the day and at 2:30 he vomited. At 5 his pulse was 110, temperature 101.8°. At 7 his bowels were again moved.

At 10 the next morning his pulse was 96, temperature 98.4°. Feels well, takes plenty of nourishment, and expressed a desire to read the newspaper.

At 5 o'clock his temperature was 101.8°, pulse 106. He had passed an excellent day, and had taken plenty of nourishment. He had not been at all nauseated, and was entirely free from pain. There had been very little discharge from the wound. He used three suppositories and slept well during the night.

At 10 in the morning his pulse was 84, temperature 99°. In the evening his pulse was 100, temperature 101.6°. He slept well during the night, and in the morning his pulse was 84, temperature 98°. I ordered a bottle of citrate of magnesia, and his bowels were moved once before 5 o'clock. At that hour his pulse was 94, temperature 99.6. His bowels moved twice again, and he was restless until 2 in the morning. At 10 A.M. his pulse was 80 and his temperature 98.8.

From this time on, with occasional relapses, he continued to improve.

## THE SEGMENT TREPHINE AND AN ASEPTIC TREPHINE.

*Read before the Philadelphia County Medical Society, Feb. 27, 1889.*

BY JOHN B. ROBERTS, M.D.,

PROFESSOR OF ANATOMY AND SURGERY IN THE PHILADELPHIA POLYCLINIC.

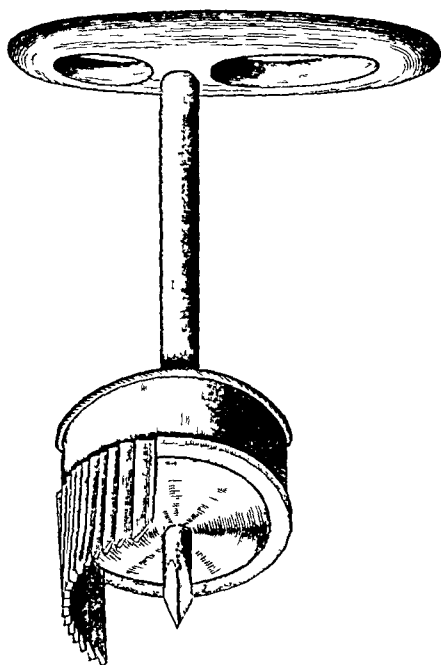
The frequency with which operations are now done upon the skull and brain has made apparent the need of improvement in our instruments for opening the skull. Seven years ago I published<sup>1</sup> an account of my experiments with the surgical engine, as a means of making openings in the skull; and I still believe it an excellent and safe means of effecting entrance to the cranial contents. The chief disadvantages are the expense of the engine and its liability in ordinary hands to get out of order. This latter objection held good at least in one hospital with which I have been associated.

The ordinary trephine, either cylindrical or conical, will probably be used much more frequently, therefore, than the surgical engine; hence, suggestions to improve its character are not inadmissible. The "segment trephine," described in the *Operative Surgery of the Human Brain*,<sup>2</sup> is, I think, a valuable instrument with which to deepen any portion of the groove surrounding the button of bone to be removed, without cutting along its entire circumference. The skull is often very much thicker in some parts of

<sup>1</sup> Philadelphia Medical Times, 1881-82, xii, p. 206.

<sup>2</sup> Page 75.

the area of operation than in others, and the ordinary trephine has to be tilted to avoid injuring the cerebral membranes at the points where the skull is thinnest. Tilting is not always easily done when the trephine is large and deeply imbedded in the bone. A "segment trephine," having the same radius of curvature as that with which the operation was begun, enables me to cut deeper, and with great care at any selected part of the groove. The accompanying illustration renders a detailed description of the instrument unnecessary. The cutting edge extends one-third of the circumference, and the centre-pin, not requiring retraction, may be immovably fixed to the head of the trephine. The instrument has no groove in the stem or handle to collect septic matter, and is readily cleaned.

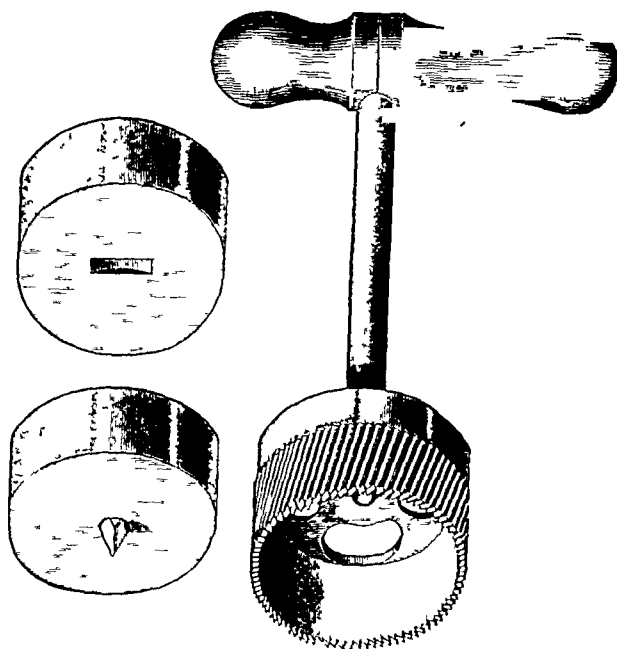


A serious objection to the ordinary trephine is the fact that it is almost impossible to get assistants and nurses to keep the centre-pin, and the tubular stem in which it slides, perfectly aseptic. Indeed, it is difficult, with every intention of perfect cleanliness, to keep the hollow stem of the instrument absolutely clean. I have endeavored to remedy this objection by making the stem solid, and substituting for the ordinary sliding centre-pin a circular block of metal, accurately fitting into the crown of the trephine, with a point upon its lower extremity.

As soon as the surgeon has cut a groove deep enough for the teeth of the trephine to be maintained in position upon the skull, the central block is taken out of the crown of the trephine, and the operation continued as with the ordinary instrument, after retracting the centre pin. Upon the upper surface of the block is cut a shallow slot, into which fits a slight projection from the upper part of the trephine crown. This compels

the block to rotate with the rest of the trephine when the operator is making the first incision into the bone. The trephine itself is made as thin as possible, in order that the groove between the disc of bone removed and the rest of the skull may be very narrow. The button of bone, when replaced, can then be held in position more readily than if the groove is a wide one. I believe that after using a thin trephine, such as this, it at times will be well to stitch the button of bone into position by catgut sutures passed through the periosteum, which may be allowed to remain upon the surface of the disc of bone, and upon the skull adjacent to the trephine opening.

The crown of the trephine must not be too conical, because such a trephine in cutting through the thick skull makes the outer portion



of the incision a very wide one. I am inclined to think that a surgeon of even moderate skill never needs a conical trephine to prevent his plunging the instrument into the brain; a cylindrical one should be just as safe in his hands as a conical one. An advantage in having the crown of the trephine slightly conical, when a large instrument is used, is the less liability of the instrument becoming jammed in the groove. This annoyance not infrequently occurs on account of irregularities in thickness of the skull, especially when a large surface is included in the trephine. It is more apt to take place, I think, when the groove is made by a cylindrical instrument, which does not make the external aspect of the incision wider than the internal.

The weight of the metal handpiece can be minimized by fenestræ, or by making the handle hollow. It is best to attach the handpiece to the stem eccentrically, as suggested by Horsley, since the hypothenar portion of the palm needs a longer lever than the thenar.

This aseptic trephine, it will be seen, is somewhat similar to the safety trephine of Hopkins,\* who suggested the use of a cylindrical block instead of a centre-pin, because of the possibility of the surgeon forgetting to withdraw the centre-pin, and, therefore, wounding the dura mater. His device contained a spring to keep the block thrust forward, and was, therefore very difficult to clean. In fact it was not constructed with an idea to facilitate asepsis, but to prevent careless puncture of the dura.

## MEDICAL PROGRESS.

**RADICAL CURE OF HYDROCELE OF THE TUNICA VAGINALIS.**—BRIGADE-SURGEON SIBTHORPE reports from the General Hospital, Madras:

Twenty-six operations for paracentesis of hydrocele are recorded under the head of minor operations in the senior surgeon's wards last year; in 14 of these a radical cure was attempted, undiluted tincture of iodine being injected in 10 cases, and pure carbolic acid in 4. As far as these small numbers go they show that there is not much to choose between the two methods; both appear equally efficacious in certain cases, and both are generally followed by some local and constitutional disturbance. The carbolic acid, however, appears to be followed by less pain than the iodine, though, with it, pain is by no means absent, as some surgeons would have us to believe.

Of the 14 cases, 9 can be claimed as cures; Case 2, with little local trouble, after six days; Case 5, a double hydrocele (there was a good deal of inflammation), discharged cured on the twentieth day, the left being reduced to the size of a hen's egg, the right smaller; Case 6, having been three times tapped and twice injected, left the hospital with a considerable amount of fluid in the tunica, which completely disappeared afterwards under the use of tincture of iodine to the scrotum; Case 7 was cured on the twenty-second day, the local trouble having been slight; Case 8 left the hospital on the twenty-eighth day, the local trouble having been slight; Case 9 left the hospital on the twenty-fifth day, having had only slight swelling after injection; Case 10 left on the eighth day, with the swelling going down. All these cases were injected with tincture of iodine. Case 11 was tapped twice, and injected with pure carbolic acid; he had a good deal of pain and swelling, with some constitutional disturbance; a small abscess formed at the seat of puncture; this was followed by a sinus, which necessitated his being kept under treatment for a long time. Case 12 absconded a month after the operation, with the swelling going down. Case 14 absconded the second day after the operation, so it was impossible to say what was the result.

There were partial cures in 2 cases, namely: Case 1, after injection with tincture of iodine on two occasions, suffered a good deal from pain and constitutional disturbance; he left the hospital with the part still enlarged thirteen days after the second operation. Case 3 left the hospital on the fifth day after the operation with some swelling remaining. In Case 4 castration had to be performed, as the two injections of tincture of iodine had been followed by failure, and the testicle was found atrophied when the sac was cut into. In Case 13 suppuration following an injection with pure carbolic acid required free incision and drainage, which was eventually followed by a cure. The long time taken in the cure in some of these cases, and the histories of the failures, lead one to question which is the most suitable operation for the cure of old-standing hydroceles, where the tunica is much thickened and very much enlarged. No doubt the treatment by injection is by far the most suitable for moderately-sized and comparatively recent tumors.

I would like to call attention to an interesting paper by Mr. J. S. McArdle, published in the *Dublin Journal of Medical Science* of September, 1887, on this subject. He alludes to the fact that the operation of incision for the radical cure of hydrocele is as old as the time of Celsus, but that it had fallen into disuse, and has been only revived since the antiseptic method of dressing wounds has come into use. He gives the following description of the methods now in use:

*Incision* (Volkman).—An incision is made from the external abdominal ring to the base of the scrotum, and reaching down to the tunica vaginalis. That membrane is incised along its entire length, and bleeding vessels ligatured. The tunica vaginalis is then washed with a 3 per cent. solution of carbolic acid, and its edges applied to those of the skin by numerous points of fine silk suture; the dressings are then applied. Englisch remarks that it is well to leave the ends of the sutures long, so as to avoid the difficulty of finding them in the swollen tissues when, on the third day, their removal becomes necessary.

*Partial Resection* (Julliard).—After the skin and tunica vaginalis have been cut, as in Volkmann's operation, the redundant portions of the latter are removed and the edges of the remaining portion brought together with fine catgut. A drainage tube is then laid in the wound, up to but not into the tunica vaginalis, and the skin wound closed.

*Complete Resection of the Parietal Tunica Vaginalis* (Bergmann).—After section of the skin and tunica vaginalis, the latter is dissected off close to the epididymis and testicle. Bleeding vessels are then ligatured, a drainage tube laid in, and the skin wound closed by numerous points of silk suture. In all the operations a 3 per cent. solution of carbolic acid is used for washing the parts. Bergmann claims that sloughing of the tunica

\*Annals of Surgery, 1885.

vaginalis, cellulitis, necrosis of the testicle, and scrotal abscess follow injection more frequently than the method of incision or resection. He also states that the method of excision or incision takes very little longer, and gives the following relative dates of healing after the different methods:

*Injection*.—Billroth, 9th day; Stoltz, 9th day; Weiss, 8 to 9th day.

*Incision*.—Volkman, 8th to 10th day; Küster, 14th day; Lister, 17th day; McArdle, 12th to 14th day.

*Excision*.—Julliard, 10th day; Bergmann, 11th to 12th day; McArdle, 7th–12th day.

The chances of recurrence are much less after entire incision, partial resection, or complete resection, than after injection. Mr. McArdle quotes 315 cases of injection by different surgeons in which the disease recurred in 13 per cent.; 245 cases of incision in which it recurred in 2.4 per cent.; 53 cases of partial resection in which it recurred in 1.9 per cent.; and 22 cases of complete resection in which the disease did not recur. He only recommends these methods for cases in which the trial of injection has been made and has failed. —*British Medical Journal*, February 23, 1889.

A CASE OF ELEPHANTIASIS ARABUM is reported by DR. R. W. FELKIN, of Edinburgh, as follows: On the 14th of July, 1888, I was asked to see an unmarried lady, a Eurasian. Her age was 33, her height 5 feet 2 inches, and her weight 11 stones  $4\frac{1}{4}$  lbs. She was born in India, and had resided there most of her life. She had always enjoyed good health, with the exception of suffering now and then from intermittent fever. She had led an active life, and had apparently undergone considerable exertion. Up to the beginning of 1887 her appetite had always been good, but she had been remarkably thin. After a rather severe attack of fever early in 1887 she noticed that she commenced to increase in size, and that her appetite was capricious. She took a great dislike to fish, and always vomited after eating it. She had also occasional attacks of nausea and vomiting with headaches. Every now and then her occupation became rather tedious to her, and she sometimes felt as if she could hardly keep up. In September, 1887, as she felt gradually growing worse, she decided to leave India for a time; and for some unknown reason she was weighed before starting on her journey, and felt surprised to find that she weighed 9 stones 8 lbs. The voyage home seems to have done her good, for when she landed in England she felt better than she had done for some time previously, and this improvement in her feelings continued for two or three months. She noticed, however, that she still increased in size, and that her skin was at times itchy and very irritable. Her limbs, too, felt painful and sore, more so than they had done in India. During the spring of 1888 she was very busily employed,

walking about a great deal; in fact, she told me that she was more or less on her feet from 9 in the morning till 10 at night. In June, 1888, she felt quite unable to continue her exertions. Her arms and legs felt heavy and powerless, her appetite became very bad, and she felt dull, low-spirited and miserable. Her food, too, frequently disagreed with her. At the beginning of July she decided to take a few weeks' rest, and she then came under my care.

On examining the patient I found her to be rather nervous. Her tongue was slightly coated with a brownish-yellow fur; her pulse was 104, full, and almost bounding in character; her temperature was  $100^{\circ}$ , respiration 24. Her heart and lungs were apparently quite healthy; her liver was slightly enlarged, the area of dulness being  $5\frac{1}{2}$  inches in the mammary line; the spleen was markedly enlarged, and extended to within  $3\frac{1}{2}$  inches of the umbilicus. On examining her integumentary system, I found that a remarkable hypertrophy had taken place; this hypertrophy affected the whole of the body with the exception of the head and neck, the forearms and hands, the legs below the knees and the feet, also the anterior aspect of the trunk from 3 inches below the clavicles to the umbilicus, and the posterior aspect of the body between the scapulæ and underneath them. The upper arm measured  $36\frac{1}{2}$  cm. in circumference at its thickest part on the right side, and nearly 36 on the left; the thigh on the right side at its middle third measured 71 cm., and nearly the same on the left; the calf on the right leg measured 35 cm. in circumference at its thickest part, and that of the left leg the same. There was distinctly less hypertrophied tissue upon the shoulders and beneath the scapulæ, and a deep groove separated the masses of hypertrophied tissue over the scapulæ. There was very marked hypertrophied tissue in the lumbar region and over the lower part of the abdomen below the umbilicus; in fact, it might almost be described as a girdle of hypertrophied tissue, which sank down several inches when the patient was in the erect position. I was, unfortunately, unable to obtain any more detailed measurements, and I much regret that it was impossible to persuade the patient to consent to a proper photograph being taken of her remarkable condition. I reproduce, however, two instantaneous photographs, which may serve to give some idea of her condition after a week's treatment and her state shortly before she left my care. The skin in the regions I have above mentioned was darkly pigmented, and formed a distinct contrast to my patient's natural complexion; it was rough, having somewhat the appearance of the rind of a boiled orange; it was tense, and appeared to be bound down to the subcutaneous tissue; this was especially the case in regard to the upper arms, the two masses of tissue situated below each clavicle, and those over the

scapulæ, but in the other regions of the body the mass of tissue had a certain amount of movement; for instance, when the patient was in the erect position, the masses of hypertrophied tissue which encircled the thighs descended, especially in front, where they completely overlapped the patellæ. On palpation, one experienced the sense of dense, brawny, slightly elastic hardness. The skin did not pit on pressure, or hardly so, but it was slightly painful to the touch. In many places, especially over the buttocks, it was distinctly nodulated, and presented a most typical elephantoid appearance, which appearance was less marked in the upper part of the body. The glands in both axillæ and in both groins were enlarged; in the natural folds of the body there was a slight exanthematous eruption. I examined the blood and the urine frequently during the progress of the case, and also punctured the tissue in various parts of the body, as I thought that at first I might have to deal with a lymphoid variety of elephantiasis; no lymph, however, could be obtained. The amount of urine passed varied from 50 to 70 ozs. in the twenty-four hours; the sp. gr. varied from 1012 to 1025. With the exception of some albumin which was present in the urine for the first three weeks, nothing abnormal could be detected. On one occasion I thought I saw a few ova of the *Filaria sanguinis hominis*, but repeated microscopical examination gave no confirmation. The microscopical examination of the blood gave no results. Menstruation was irregular and slightly painful.

*Treatment.*—Absolute rest was enjoined, and the patient had a hot bath almost every day. A moderate amount of bland food was ordered, consisting chiefly of milk (the patient could never eat fish; I tried her with it on several occasions, but it always caused nausea and vomiting). The patient was regularly massaged. Commencing with half an hour a day, the rubbing was subsequently increased to an hour and a half, and the constant current battery was applied for twenty minutes each day. A mixture was prescribed containing quinine, arsenic, iron and strychnine, and the bowels were regulated by the frequent administration of aperients. The progress of the case was in every way satisfactory; with the exception of a slight rise in the temperature for six days after the massage had been commenced, all went well. The patient complained of nothing excepting the battery and the pain that the massage gave her during the first three weeks. The massage and battery were discontinued about the 10th of September, by which time the skin had become normal in character—in fact, had returned to its usual condition, and all tension and hard feeling had disappeared. A remarkable diminution had taken place in the circumference of the limbs, the circumference of the upper arms having been reduced to 25 cm., and the middle

third of the thighs only measuring 54 cm. in circumference. The mass of hypertrophied tissue encircling the body had quite disappeared. The patient stated that she felt quite well, buoyant, and fit for work. She could walk with ease and comfort, and by the middle of October she was apparently quite restored to health, and has continued so to the present time. I should perhaps mention that for a week or two after her prolonged rest the patient suffered from slight swelling of the feet and ankles. This condition, however, completely disappeared.—*Edinburgh Medical Journal*, March, 1889.

NEW ANTISEPTICS IN PHTHISIS.—DR. C. THEODORE WILLIAMS, after speaking of the results obtained with phenyl-propionic acid (see THE JOURNAL of last week), says:

Phenyl-acetic acid ( $C^6H^5O^1$ ) belonging to the same series as phenyl-propionic acid, resembles it closely in taste, but has a more acid reaction. It dissolves in alcohol 1 in 6, and when thus dissolved is more soluble in water, so that 20 minims of the alcoholic solution is taken up by a small amount of distilled water. The alcoholic solution was given in doses of 10 minims to 20 minims three times a day, under the same conditions as the phenyl-propionic acid, to 19 cases of phthisis.

*Nature of Cases and Duration of Disease.*—The patients were 14 males and 5 females, the ages of the males varying from 18 to 40, with an average of 29.6 years, and those of the females varying from 14 to 40, with an average of 21 years. There was a great variety in the duration of the disease in these patients, as it ranged from 2 months to five years, the majority having at least one year's symptoms. One was a case of scrofulous phthisis, and one a case with cavities in both lungs and right pneumothorax. One patient, a girl of 18, apparently contracted phthisis from nursing a sister who was in a far advanced stage of the same disease. In two cases pyrexia was present.

*State of Lungs.*—Nine patients had tuberculization of one or both apices, the right lung being affected in three, the left in three, and both apices in 3. In most cases the tuberculization did not extend beyond one lobe. In 10 patients cavities were present, in 6 the cavity was limited, and the opposite lung free; in 2 others there was excavation of one lung and tuberculization of the opposite one. In 2 patients cavities existed in both lungs, and in one of these patients right pneumothorax had supervened. There were therefore 7 cases of double affection, against 12 of single affection. The sputum was examined for tubercle-bacilli in 15 cases, and these organisms were detected in all in varying abundance. The patients took the phenyl-acetic acid for periods varying from 21 to 89 days, the average being  $45\frac{1}{2}$  days, and in no

case did it give rise to any unpleasant symptom. The odor was perceptible in the ward, though never in the patient's breath or in any of the secretions. All other medicines, except purgatives when required, were suspended during the trial of the drug.

*General Results.*—Thirteen improved, 3 greatly; 4 deteriorated; and 3 remained stationary. The improvement here consisted in gain of weight, strength, and color, and doubtless this was partly due to the diminution of cough and expectoration. The weights of 18 out of the 19 cases were recorded, and these show gain of weight in 12, loss in 4, and a stationary condition in 2; the gain varied from  $1\frac{1}{2}$  pounds to  $9\frac{1}{2}$  pounds. The losers in weight included the 2 pyrexial cases and the pneumothorax patient, who died later on.

*Local Results.*—Twelve patients showed an improved condition of lungs, 4 showed a worse state, and in 3 it was neither better nor worse. The improvement consisted of subsidence of cough and reduction of expectoration, with diminution in the physical signs. In the worse cases there was either advance or extension of the disease, or both. Among the "improved" cases 8 were first-stagers, and in 7 of these diminution of physical signs is noted; and 4 were third-stagers. This shows local improvement in eight-ninths of the tuberculization cases, and in only two-fifths of the cavity cases. The effect on the cough and expectoration was very marked, both being reduced thereby. It would thus appear that the phenyl-acetic acid produced very satisfactory results; general improvement taking place in 68.4 per cent., local in 63.15 per cent. On the whole this acid appears to be more successful than its congener, phenyl-propionic acid, as the subjoined figures of the percentages of improvement will show:

	Patients	Improvement.	
		General per cent.	Local per cent
Phenyl-propionic acid . . . .	20	65.0	25.0
Phenyl-acetic acid . . . . .	19	68.4	63.4

In gain of weight the phenyl-propionic acid cases had the advantage, as 70 per cent. of these gained weight against 66 per cent. of the phenyl-acetic acid cases.

Neither phenyl-propionic acid nor phenyl-acetic acid<sup>1</sup> appeared to have exercised the slightest influence on pyrexia, and this, considering how closely allied they are to antifebrin and other antipyretics, is very remarkable.

It may be naturally asked, did these patients fare better than similar cases treated with cod-liver oil and bitter tonics who were on the same dietary? Cod-liver oil is a food, not a medicine, and so we can hardly pit these new medicines

against it; but as regards the usually prescribed tonics, such as quinine and mineral acids, I question if any of these can show equal results to the above, and I think therefore that these antiseptics merit a fair trial. I would close this paper with the following conclusions:

1. Phenyl-propionic and phenyl-acetic acid promote appetite, digestion, and assimilation in phthisis, and thus cause gain of weight.

2. They are well tolerated in considerable doses by patients for long periods of time.

3. Their influence on the lungs is less marked than their constitutional influence, but phenyl-acetic acid acts more beneficially on the lungs than phenyl-propionic acid, and appears to reduce cough and expectoration.

4. The use of phenyl-acetic acid appears to be more indicated in cases of tuberculization, and that of phenyl-propionic acid in excavation cases, but a larger number of observations are required to speak with certainty on this point.—*Practitioner*, February, 1889.

*SALICYLATE OF CRESOL.*—At a meeting of the Academy of Sciences PROF. BOUCHARD read a note for Dr. Letzinski, of Bern, on the salicylate of cresol, which is not soluble, and which is a powerful antiseptic. This medicament has, according to the author, given good results in acute rheumatism. As it is possible to saturate the intestines without inconvenience, and as the microbe of cholera appears to have its principal habitat in the intestines, Dr. Letzinski thinks that this substance may be employed with success in the prodromic period of the choleraic attack. M. Bouchard, however, makes some reserve on this last point, for he does not participate in the opinion of those who hope to cure cholera with antiseptics introduced into the intestines.—*Lancet*, February 9, 1889.

*NATURE AND TREATMENT OF DIABETIC COMA.*—DR. STADELMANN, of Dorpat, in a recent article in the *St. Petersburgische Wochenschrift*, points out the great similarity which seems to exist between the coma of diabetes and the condition produced in herbivorous animals by inducing acid intoxication. Amongst other points, he refers to some analyses by Minkowski, of the gaseous contents of the blood. In the normal condition, the blood of the rabbit contains 25 per cent. of carbonic acid; but when the animal is suffering from artificially induced acid intoxication, the carbonic acid is diminished. Thus, in one instance, Minkowski found it 16.4 per cent. with a moderate degree of intoxication; when the latter was increased, the percentage of carbonic acid fell further, first to 8.8, and finally to 2.9 per cent. In order to compare this with the gaseous changes in the blood of diabetics, he examined the blood of a patient before and during

<sup>1</sup> These drugs are very difficult to obtain. They are prepared by Schuchardt, of Gorlitz, and have been obligingly procured for the Brompton Hospital by Messrs. Burroughs, Wellcome & Co., Snow Hill, E. C., who now supply them.



coma, the carbonic acid being respectively 17 and 3.34 per cent. In order to ascertain whether this diminution of the carbonic acid in the blood was merely due to coma as such without reference to its cause, he examined the blood of a comatose patient, not a diabetic, whose condition was due to meningitis. Here the carbonic acid amounted to 28.2 per cent. The acid existing in diabetes appears to be oxybutyric acid, which in some cases appears in the urine to the extent of something like 3 ounces per diem. Some years ago Dr. Stadelmann found a new acid, which he believed to be crotonic acid, in considerable quantity in certain cases. He now, however, considers it merely a substitution-product from oxybutyric acid.

The indications for treatment supplied by these views are, of course to, combat the acid by large quantities of alkali. Several attempts have been made to treat diabetic coma by injecting into the veins from 1 to 4 ounces of carbonate of soda dissolved in about four pints of water, with a little chloride of sodium. In only one instance, however, has this proved successful, and unless it is done very early no good result can be fairly expected of it. It is found that the urine in twelve hours after the injection is intensely acid. Better results are to be obtained in attempting to ward off coma by giving alkalies freely. Thus, Dr. Stradelmann prescribes about an ounce of tartrate or citrate of soda dissolved in about half a pint of soda-water two or three times a day, and has found great reason to be satisfied with this line of treatment. Of course, if coma should come on, he would have recourse to alkaline intravenous injections without loss of time.—*Lancet*, Feb. 9, 1889.

**THE LOCAL TREATMENT OF LARYNGEAL PHTHISIS.**—DR. A. SOKOLOWSKI, of Warsaw, concludes an article on the treatment of laryngeal phthisis, with the following summary :

1. A cure of laryngeal phthisis, though seldom effected, is possible.

2. Cicatrization of each ulcer which takes place by itself, or through local application, is closely related to the general condition and the character of the local changes in the lungs.

3. The best local results are obtained from the combined treatment by lactic acid, surgical procedures, and the galvano-cautery.

4. General treatment should go hand in hand with the local treatment.—*Wiener klin. Wochenschrift*, No. 4, 1889.

**MEDICATED THALLIN BOUGIES IN GONORRHOEA.**—DR. JOHN M'CAW, of Dublin reports the following case : H. J. had impure connection four days before he applied to me for relief. His symptoms were those of acute gonorrhœa, the disease having been considerably aggravated in con-

sequence of his having been drinking heavily both before and since he contracted it. The yellowish-green discharge from the urethra was abundant ; he suffered severely during micturition, and there was great tenderness along the whole course of the penile urethra. The night before he came to me he was obliged to rise five times to pass water. He had the disease seven years ago, and was then under treatment for about two months with a medical gentleman in this town, who gave him copaiba. The line of treatment adopted in this case was by the introduction into the urethra of medicated bougies, and the medicament consisted of sulphate of thallin of 5 per cent. strength. Before introducing the bougie I made the patient micturate, in order to clear the urethra of discharge, and I then passed the bougie up to the ring, and directed him to hold the meatus quite close, so that none of the application could flow out as it melted. I kept him lying on his back for 20 minutes, at the end of which time I withdrew the spring and closed the meatus with cotton wool. During the time the bougie was in the urethra he complained of smarting pain, but after I withdrew the spring he said the pain ceased entirely, and he expressed himself as feeling comfortable. He introduced one every evening after this, following carefully the directions I gave him ; and on the third day after he had been with me he called to say he was quite cured, having no discharge of any kind, and no pain on passing water. The day following happened to be his busiest day in the week, as he had to work to 12 o'clock at night, and be on his feet the greater part of that time. In consequence of this he could not get to using his bougie that day at all, and on the next morning there was a slight return of the former symptoms ; but he began anew his treatment, and after using two more bougies, was again perfectly cured. He has remained so since, although he has undergone the heavy day of the week which caused him to relapse before, and this time with impunity. No bad after-effects of any sort resulted from the treatment, and my patient was very grateful, as well as very much surprised and delighted, for he had been looking forward to a course of copabia-drinking with anything but pleasant recollections.—*Dublin Jour. Med. Science*, March, 1889.

**MERCURIAL TREMOR.**—M. LETULLE reports the case of a man of 39, who was, at his work, exposed to emanations from the acid nitrate of mercury. For eleven years he suffered in no way except that his teeth became black and fragile. At this time he served three years in the army and then resumed his trade. Ten years later he had his first attack of mercurial tremor. A course of sulphur baths and iodide of potassium relieved but did not cure him. The tremors were worse in the morning, almost imperceptible about 4 to

5 P.M., and again very marked in the evening. Suddenly one day the tremors became so violent that the man was thrown down by them and was so violently convulsed that he could not walk; in this condition he was brought to the hospital.

When perfectly at rest in bed the movements were slight, but they were very much intensified by any voluntary effort. The motions were extensive, rapid, arrhythmic, not like those of any disease, though choreiform, and were, perhaps, more marked upon the left side. There was an anæsthetic area on the back of the right forearm and hand, and the man said that since the first attack of tremor his vision had been impaired. There was some narrowing of the left visual field without any notable color-blindness. These peculiar symptoms led Letulle to name the malady *mercurial hysteria*. He accidentally discovered that constricting the limb would check the tremor, and he finally permanently stopped it by the application of an elastic ligature, and the passage of a magnet up and down the limb. He therefore concluded that mercury in a case like this produced no serious structural lesion in the brain or cord, but appeared to exalt in a singular way the activity of the nervous centres and profoundly disturb the harmony which governs their functional synergy.—*La France Médicale*, November 8 and 10, 1888.

**ALPHA-OXYNAPHTHOIC ACID AS AN ANTISEPTIC.**—It is now six months since alpha-oxynaphthoic acid was brought out as an antiseptic. Helbig (*Therap. Monatsh.*) records what has been effected by it so far. He recommends a collodium made from it (0.5 per cent.) as a substitute for iodoform collodium, as it is a very strong antiseptic. It has the advantage over the iodoform preparation of not irritating the skin of sensitive subjects, and of being more staple. There can be no doubt that iodoform collodium is by no means a satisfactory preparation. Efforts are being continually made to improve it, so that this substitute should find a wide field for trial. The same author recommends an antiseptic wool in the treatment of ulcers and wounds. He prepares it as described under:

R Acidi  $\alpha$ -oxynaphth . . . . . 3j  
Spiritus vini rect . . . . . 5viij  
Glycerini . . . . . 5iss  
Fuchsi . . . . . gr. 1-12

The resultant liquid is sufficient for 7 ounces of wool, and gives a product which, when dry, contains about 1.4 per cent. of acid. The paper shows, on the whole, that there is plenty of room for good new antiseptics, although we have so many already.

**PHYSIOLOGICAL ACTION OF SULFONAL.**—From some experiments on this subject W. J. SMITH

draws the following conclusions: 1. In moderate doses sulfonal is completely transformed into very soluble compounds (sulphacids); in this respect it is distinguished from a large number of similar bodies, the disulphides among others, which pass through the organism unchanged; for example, ethylene diethylsulphide. 2. Sulfonal does not affect the elimination of sulphuric acid, which shows that the organic compounds formed by sulfonal have great stability. 3. In moderate doses sulfonal has no influence on organic combustions.

**COMBINATIONS OF LANOLIN.**—DR. STERN, a specialist in skin diseases, publishes in the *Therap. Monatsh.* some notes on new combinations of lanolin. "Sapolanolin" is a mixture of  $2\frac{1}{2}$  parts of anhydrous lanolin to 2 parts of pure soft soap. With this base all medicaments may be mixed with the exception of salicylic acid. The author used it for applying boric acid, tar, white precipitate, resorcin, etc. These ointments were found to be specially advantageous in inveterate infiltrated eczema, in mycosis and seborrhœa. Against psoriasis capitis he used an ointment made as described hereafter:

R Hydrarg. precip. alb. . . . . 3j  
Saponis mollis . . . . . 3iv  
Lanolin anhyd. . . . . 5jss

℞

Anhydrous lanolin is of course simply the ordinary lanolin of commerce, deprived of its 25 per cent. of water. Sapolanolin with white precipitate, is, according to the author, just as effective on the head as chrysarobin is on the body. As a paste which adheres to the skin, without necessitating the use of a bandage he used a mixture of

Oleum olivæ . . . . . 3ij  
Cera flava  
Lanolinum anhyd. ana . . . . . 5ss

The ointment is a pale yellow color, and of thick consistence. It can be mixed with all other ointments when, for the treatment of eczema, the use of such a paste is indicated. Another suggestion of the author is the use of lanolin injections for the urethra, such as the following:

R Zinci sulphatis . . . . . gr. x  
Aquæ . . . . . 3ij  
Dissolve and add to—  
Lanolini anhyd. . . . . 5v  
Olei amygdal . . . . . 5ij

℞

Or, as under—

R Acidi salicylatis . . . . . gr. v  
Dissolved in—  
Olei amygdal . . . . . 5ij  
Lanolini anhyd. . . . . 5j

℞

Injectons are made with an ordinary syringe, and it is found that the medicaments are very readily absorbed by the mucous membrane.—*Provincial Medical Journal*, March 1, 1889.

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SATURDAY, MARCH 23, 1889.

PRACTICAL ANATOMY IN THE COLLEGES.

In looking over the "requirements for graduation" of the ninety degree-conferring regular medical colleges of the United States, one is particularly struck with the variety of requirements in regard to practical anatomy. Some of the schools require thorough dissection of the whole body; some "certificates of at least one course of practical anatomy;" others "practical anatomy during two sessions, and dissection of all parts of the cadaver;" still others require "dissection of one lateral half of the body;" and some do not mention practical anatomy in their requirements for graduation.

What must be the surprise of the recent graduate of a college that requires a minimum amount of dissection, to read that John Hunter, Sir Astley Cooper, and other eminent surgeons of the olden time scarcely considered that they were entitled to their breakfasts until they had done some dissection—and this every day during their professional lives! We would not be understood as holding the opinion that dissection is the best exercise for acquiring an appetite in the morning, nor that it is necessary that each surgeon should spend some part of each day in dissecting. But anatomy can be learned best by dissection; and it appears that practical anatomy is far too much neglected in the colleges. In some of the schools it can scarcely be otherwise than that the student is simply introduced to the study of anatomy. Certainly, some of the graduates are not well acquainted with the subject. Anatomy is a sub-

ject for the practical study of which the medical man has but little time or opportunity after he gets into practice. Like chemistry and physiology, it must be learned at the college, or the chances are, it will never be learned.

Is the incentive to the study of practical anatomy in the schools sufficient? We think not. Not being required, in the majority of instances to pass practical examinations in anatomy, the student, in a large number of cases, thinks it quite sufficient if he knows enough of the subject to write on paper the answers to certain questions. He would view the matter in an entirely different light if he had to demonstrate (as a part of his examination) some portion of human anatomy, especially if he had to make the demonstration before others than the teachers in his college. This should be the more important part of the anatomical examination. And it would be well if it were, or could be, the only kind of anatomical examination before State licensing bodies. The anatomical part of the German *Staats-Examen* is of this nature—entirely practical. The candidate is required to demonstrate a "part" or one of the cavities of the body in the presence of at least two members of the examining board. Clearly, the student that has learned his anatomy from a book can have no place in such an examination. And inasmuch as the practitioner must practice on men rather than on books, this is the only proper method of finding whether the student has a working knowledge of anatomy. At the University of Virginia a part of the anatomical examination consists of actual demonstrations on the cadaver of several parts of the body. Whether such examination is required in any other American colleges we do not know.

It may be said, also, that topographical and morbid anatomy are much neglected in American schools; yet no one doubts their great importance. How many students, or medical men, can point out on the living subject the structures that lie beneath a given superficies? How many recent or old graduates can make a *post-mortem* examination as it should be made? Are not very many students graduated after hearing lectures on pathological anatomy without having had an opportunity of seeing specimens of the morbid affections of which they have heard?

Why should a student be required to listen to "twice told tales" in the anatomy room, without

having what he hears verified by anatomical demonstrations—apart from the actual work in the dissecting room? And does it not appear to be self-evident that a student can learn more from an autopsy, properly conducted, than from half a dozen didactic lectures on the pathology of a given disease?

These are questions that medical teachers, and examining boards, would do well to ask themselves.

#### HOT-AIR INHALATIONS IN PHTHISIS.

If one is to accept the statements of DR. A. L. STERN at the last meeting of the Section on Practice of the New York Academy of Medicine, the desideratum that has been so long and so fruitlessly sought for, a positive cure for pulmonary tuberculosis, has now been attained. This cure, Dr. Stern claims, is effected by Dr. Weigert's hot-air inhalation-apparatus, which he exhibited, and the use of which he explained. It is simple in construction, consisting of two copper cylinders, one within the other, and the air to be inhaled, which is heated by means of a Bunsen burner to a minimum temperature of  $212^{\circ}$ , and thus rendered perfectly aseptic, passes up between the two. The inhalation is to be used for four hours each day—two hours at a time—and it can be taken either in a sitting or reclining posture. It is advised, however, that when first commencing the treatment the patient should use the apparatus for thirty minutes only twice a day. The temperature of the air inhaled is gradually increased from  $212^{\circ}$  to as high a point as the patient can bear without suffering inconvenience;  $482^{\circ}$  being the highest temperature as yet reached in any case in these inhalations.

As a result of the hot-air inhalation, it is claimed, there is an acceleration of the pulse, while there is diminution in the frequency of the respirations, and inspiration becomes deeper. There is at first an elevation of the body temperature, the rise being from  $1^{\circ}$  to  $2^{\circ}$ ; but after about an hour the temperature again subsides. Under the continued use of the inhalations the difficulty of breathing incident to consumption is soon markedly relieved, and there is at first a lessening, and then a total cessation of cough. There is at first an increase, then a decrease, and finally total disappearance of expectoration. All catarrh-

al symptoms disappear, as do the fever and night-sweats. There is a clearing up of the infiltrated portions of the lungs, and cicatrization of cavities, when these exist, is brought about; while the strength, weight and appetite of the patient gradually increase. The microscopic examination of the sputa generally shows at first an increase in the number of the bacilli tuberculosis, but afterwards there is a total disappearance of the bacillus, and a complete cure is effected. The shortest period in which total disappearance of the bacilli has been noted is four months. This method of treatment, Dr. Stern said in conclusion, has now been employed in 150 cases, 50 of which were published in Vienna.

All this reads like a fairy tale, but it can be safely assumed that it will not be long before the method has been given a sufficiently extended trial to enable the profession to decide upon its merits. Dr. Weigert, the inventor of the apparatus, is a graduate of the College of Physicians and Surgeons of New York City, and is now residing in Berlin. We learn that Dr. Trudeau, of Saranac Lake, N. Y., has already used the hot-air inhalations with success in a number of cases. There is but little doubt that this method of treating phthisis will be extensively tried. It is to be hoped that the trials will be as careful as extensive, so that whatever of value there may be in the method will not be vitiated by and wrong conclusions drawn from improper and careless experiments and administrations.

#### ILLINOIS STATE MEDICAL SOCIETY.

The Thirty-ninth Annual Meeting of this Society will be held in Jacksonville, commencing on Tuesday, May 21, 1889, at 10 o'clock, A.M. Only two months elapse before the time specified, and it is important that all parties intending to attend or contribute to the interest of the meeting, should be actively preparing their work. The several State Medical Societies constitute the chief and proper basis of the National organization of the profession, and they should be cordially sustained by the most learned and active in all departments of medicine and surgery.

There is room in the State Society for the advocates of every legitimate interest to work, and interchange thoughts and facts with each other, thereby actively advancing the practical interests

and promoting the unity and influence of the whole profession. In a country as large as ours there is no method of complete and efficient professional organization, except that which begins with the municipal and county societies, progresses from these to the State, and from the State to the National; thus establishing the channels of universal intercommunication, and the opportunities for personal intercourse and of harmonious action. During the next two months the State Medical Societies of nearly all the States occupying the middle and northern part of the great interior valley of this continent will hold their annual meetings and we hope to see larger assemblages, a greater number of well prepared papers, and the results of more thorough scientific investigation, in all of them, than at any previous time in their history. The annual meeting of the American Medical Association will follow at Newport, R. I., commencing on the 25th of June. For four previous years that great National organization has held its annual meetings in this interior valley, with steadily increasing attendance. As the next meeting is to be held on the north-eastern border for the first time since 1865, it is very desirable that all the State Societies of these great interior States should send full delegations to the meeting at Newport, thereby not only cordially reciprocating the favors of the past four years, but firmly cementing the bonds of friendship and materially adding to the scientific and practical interests of all.

#### THE MICROBES OF THE STOMACH.

This was the subject of a recent communication to the Académie des Sciences, by M. ABELOUS. In the fluid obtained by frequent lavages of his own stomach (empty) he has isolated 16 species of microbes, the morphological characters and action of which on alimentary substances, he has studied. The 16 species comprise 7 known microörganisms: the sarcina ventriculi, the bacillus pyocyanous, the bacterium lactis aërogenes, the bacillus subtilis, bacillus mycoïdes, bacillus amylobacter, and the vibrio rugula. Of the 9 species that have not been described, 1 was a coccus, and 8 were bacilli. All these microbes resist the action of artificial gastric juice for a time much exceeding the mean duration of stomach digestion, especially when the cultures were rich

in spores. Each of these species of microbes has a more or less energetic action on certain alimentary substances: 10 attack albumen, 12 fibrin, 9 gluten, 10 cause the more or less complete transformation of lactose into lactic acid, and 13 form variable quantities of glucose from starch. But the most remarkable results, says Abelous, are seen in the action of all these microbes, at the same time, on an alimentary substance, especially when some saliva is added to the substance. Very rapid and very energetic decomposition sets in, with the evolution of gas and the formation of such products as leucin, tyrosin, indol, skatol, certain fatty acids and ammoniacal compounds. It is a fair inference that these microbes are very important factors in the process of digestion. The real theatre of their action, says Abelous, should be the intestine, not the stomach, since the duration of stomach digestion is not sufficient to allow the microbes to decompose appreciable quantities of alimentary material—if one may draw conclusions on this point from a study of artificial digestion.

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#### EDITORIAL NOTES.

THE FLORIDA STATE BOARD OF HEALTH is now, so far as the legislative act is concerned, a reality; it is thought that the Governor will soon appoint the members of the Board. We have not seen a copy of the act, and do not know its conditions and provisions. The Board is to consist of three members, who will select from the State at large a secretary and an executive or health officer, the latter to be a physician. Whether the emoluments of the officers will be sufficient to warrant them in giving the proper attention to their duties we do not know. As a general rule such is not the case. Governments cannot expect to have offices properly filled so long as private enterprise is allowed to outbid the public services. Yellow fever cost the State of Florida millions of dollars last summer; it can never recover that money, but by paying efficient men to look after its health it may avoid the loss of millions in the future.

GENERAL PARALYSIS IN THE FEMALE, in relation to certain menstrual troubles, has been investigated by DR. GILBERT PETIT (*Thèse de Paris*, 1888), who concludes, from 59 cases, that the development of general paralysis in women

often causes menstrual troubles. These troubles are characterized sometimes by a sudden and definite arrest of the menstrual function, sometimes by marked irregularity of the menstrual periods. When there occurs a remission in the course of the general paralysis, the regularity of the menstrual function is re-established. The patients that have no menstrual trouble during the diffuse meningo-encephalitis, appear to resist the disease better than those whose menstruation is completely arrested or made irregular.

A MEDICO-LEGAL SOCIETY has been organized in Belgium. At present the only medico-legal laboratory that exists in Belgium is attached to the University of Gand. Dr. Vleminckx, of Brussels, is President of the new Society, and Dr. C. Moreau, of Charleroi, Secretary. The Society begins with a membership of 40 physicians.

A NEW PRIZE IN HYGIENE has been founded by the widow of the late Dr. Pier d'Hony, of Milan, in memory of her husband. The prize amounts to 1000 fr., which the Royal Italian Society of Hygiene will award for the best memoir on a question of industrial hygiene, special attention being paid to prophylaxis and precaution against disease, injuries, and accidents of any particular field or fields of labor. The memoirs must be in the hands of the Society by February 29, 1890.

TOTAL DESTRUCTION OF THE SPINAL CORD in mammals by means of a stream of cold water, which prevents hæmorrhage, has been studied by M. GLEY. This method enables one to observe the different vaso-motor actions, independently of all nervous influence of central origin. When the cord has been destroyed in this way strophanthus causes a marked general vaso-constriction. By this method one may study the origin of the vaso-motor phenomena produced under the influence of certain medicamentous and toxic substances.

THE INFLUENCE OF TOBACCO-SMOKE ON MICROBES was the subject of a note by HAJECK at the meeting of a Vienna Medical Society on January 17. Basing his researches on the experiments of Tassinari, of Pisa, who showed that tobacco-smoke hindered the development of microbes, Hajeck looked up the vital statistics of Vienna, to see whether diphtheria is less prevalent among

men, who generally smoke, than among women. He found that for the past four years the ratio of diphtheria cases in men to those in women was 1:2.8, or almost three times as many cases in women. This, he claims, bears out the experimental results of Tassinari. It may be suggested, however, that men, as a rule, lead more of an open-air life, and do not, so frequently as women, nurse children and others suffering from diphtheria. Israel showed that tobacco-smoke destroys bacteria-cultures. But it seems that Hajeck has based his conclusions on insufficient data. We should know the other habits of the males that had diphtheria, besides knowing whether or not they smoked.

SUBUNGUAL PULSE.—MARIO SACCHI describes in *Riforma Medica*, 1888, No. 224, a second case of subungual venous capillary pulse. The first case was seen by Giocco in a patient that had tricuspid insufficiency. Sacchi's patient was a woman 60 years of age, with relative tricuspid insufficiency, in which a systolic return current into the veins produced the venous capillary pulse.

THE UNIVERSITY OF PENNSYLVANIA is discussing the extension of its medical course from three to four years. At a recent meeting of the Board of Trustees Dr. William Hunt said, according to the *Philadelphia Press*:

As we raise the standard of the University it becomes necessary to lengthen the term of the medical course, and this will unquestionably be done before very long. In fact, it must be done. The University is one of the most prominent institutions in the medical history of the country. Its course at present provides for a compulsory study of three years in order that the student may obtain the degree of Doctor of Medicine, but our catalogue now recommends that students pursue a four years' course. The additional, or what may be called a post-graduate, year of study, is already provided for, and I think that the extra year will very soon be added to the present three years' term.

At the same meeting of the Trustees a new chair of Histology and Embryology was created, and Dr. George A. Piersol elected Professor. Dr. De Forest Willard was elected Professor of Orthopædic Surgery, which is practically another new chair, and Dr. Samuel G. Dixon was elected Pro-



fessor of Hygiene, in connection with which chair a laboratory will be established. It is announced that Mr. Henry C. Lea has given to the University \$25,000 for the use of the laboratory of hygiene, conditioned on the raising of an equal sum by the University. Of this additional \$25,000 a goodly portion has been subscribed or guaranteed, and it is hoped that the remainder will be speedily forthcoming.

## ASSOCIATION NEWS.

### American Medical Association. Fortieth Annual Meeting.

*To be held in Newport, R. I., June 25, 26, 27 and 28, 1889.*

The names and addresses of Section Officers and other officers of the Association are printed on advertising page 25.

*Special Attention is called to the following Rules of the Association:*

It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arrangements at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting. Such programme shall also contain the rules specified in the By-laws and Ordinances concerning the consideration and disposal of all papers in the Sections.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Every paper or address received by this Association, or by a Section, and ordered to be published, and all reports of Committees, and all plates or other means of illustration, shall be considered the exclusive property of the Association,

and shall be published and sold for the exclusive benefit of the Association.

### ORDINANCES.

*Resolved*, That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, namely: 1. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value. 2. Such as may contain the results of well-devised original experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

*Resolved*, That the several Sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said authors may select, with the privilege of placing at the head of such papers, "Read to the \_\_\_\_\_ Section of the American Medical Association on the \_\_\_\_\_ day of \_\_\_\_\_ 18 \_\_\_\_" (Vide *Transactions*, vol. xvi, p. 40.)

*Resolved*, That no report or other paper shall be presented to this Association unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication. (Vide *Transactions*, vol xvii, p. 27.)

## SOCIETY PROCEEDINGS.

### Chicago Medico-Legal Society.

*Meeting of March 2, 1889.*

THE PRESIDENT, DR. E. J. DOERING,  
IN THE CHAIR.

CLARK BELL, ESQ., of New York, read a paper on

### ELECTRICITY AND THE DEATH PENALTY.

(See THE JOURNAL of March 9.)

DR. FRANKLIN H. MARTIN said he did not feel competent to add anything to this paper, on the subject of execution by electricity. If, however, our criminals are to be executed at all there seems to be very little doubt in regard to the superiority of electricity over the gallows, especially if we take into consideration this interpretation of the law as given by the Commission appointed by the State Legislature of New York to investigate this subject, **that** is, that **te do not**

claim the right to inflict punishment upon the homicide in a vindictive or retaliatory sense, or as in any degree as punitive or compensatory for the act committed; that is, we have no right, if this Committee interpreted the law correctly, to inflict other punishment than the death penalty upon our criminals. Electricity seems to me to be the force that should be applied, for this reason. In hanging there are two causes of death; one is the destruction of the nerves of organic life by the breaking of the neck and pressure upon the spinal cord, the other is from strangulation. We have both of these effects where the criminal is properly executed. If from the time the noose begins to tighten upon the neck of the criminal until death is declared by the physician in attendance, in any degree measures the time that the criminal must suffer, we certainly can see that electricity is superior. While this cord is tightening on the neck of the criminal and death is taking place, a current of electricity might pass through the criminal and do its work and pass to the sun and return, so that if consciousness ceases at the time the current passes through the criminal's spinal cord and brain much suffering must be prevented. The consideration of methods has been so thoroughly discussed by the paper that there is certainly very little left to say. In the first place the position of the criminal must be considered; and the electrodes that conduct the electricity to him must be properly applied; also the kind of current and its strength must be considered. The electrodes described in the paper, that is, large sponge electrodes, or electrodes 3x4 inches covered with sponge or chamois and saturated with salt water solution, must be the electrodes applied if we desire to prevent mutilation. If these electrodes are applied one at the top of the head and the other at the back of the neck, the part of the human system in which consciousness lies is destroyed immediately. Experiments immediately made on lower animals show that the structure of the brain with a powerful alternating current, is entirely destroyed. This is not the case, of course, with hanging, where strangulation is the cause of death. The current described as alternating, is possibly not thoroughly understood by all. It is not an interrupted current, as one statement in this paper might lead one to believe; it is a current that changes its polarity at every interruption; the current is a to and fro current. In a current from a Westinghouse electric light dynamo the polarity is changed 600 times in a second, and the current is deadly in the extreme. Although it seems almost presumptuous for any one to bring a question up at this time after the opinion expressed by Mr. Edison, still there is a question with regard to the proper apparatus for the execution of criminals. It seems that the dynamo, engine and apparatus necessary for execution by the method described

in this paper can be obtained only at an expense of \$5,000. The kind of electricity that is most deadly, and we have a great many examples of its action, is the current in the lightning stroke; that is, the static electricity, or the Franklinic form of electricity. While it is the same electricity, probably, as that we receive through our dynamos, it is one of very high electro-motive force. A machine with a 54-inch wheel and an apparatus that would cost in the neighborhood of \$500 will give an instantaneous shock that will prove as deadly, without doubt, as the alternating current generated by a \$5,000 apparatus. In adopting electricity as the mode of execution there are certainly grounds yet for further experiments.

DR. PLYM. S. HAYES: There are several points of interest in regard to death by electricity that I have not seen mentioned in recent literature on the subject. Decomposition takes place almost immediately after death by lightning. Prof. Richman, of St. Petersburg, a contemporary with Franklin, had in his laboratory a metallic ball which passed, by means of a metallic conductor, through the ceiling and terminated on the roof in a sharp point. When not using this electricity he connected this ball, by means of a chain, to the earth. When he wished to collect the electricity he would disconnect the chain. One day he passed within 18 inches of this ball and the current jumped across and he was killed, and so rapidly did decomposition set in that he had to be buried almost immediately. Again we find that when death occurs from lightning-stroke *rigor mortis* does not occur. Again we have instances in which the person is fixed immovably, sometimes standing.

In looking up the subject for life insurance I found there were one or two men in the city of Chicago who had taken a current of electricity of sufficient strength, under ordinary circumstances, to kill a man, but who escaped with their lives. Again, I found that if the current was gradually increased and then as gradually diminished, a man could take a tremendous current, one which would usually have killed him, but being a continuous current of great evenness gradually increasing and diminishing, the man escaped without injury. There is a point mentioned in this paper, and which I have seen mentioned in some of the medical journals. One journal stated that 500 volts would kill. And in the paper that has just been read the point has been raised in regard to the number of volts necessary to be used, and it is recommended that from 1,000 to 1,500 volts of current be used. Now they say nothing of the ampèreage of the current. It seems to me that ampèreage cuts just as much of a figure as voltage. In the case of static electricity we find that between the conductors of a machine, where we can get a spark of 6 or 7 inches, we will have an electro-motive force of not less than 3,000 volts, and

yet there is not one of us in this room but can take that through his body without injury, because there is no ampèreage to speak of. But if the spark jumps a foot then it is decidedly more dangerous; but even then it depends upon the condensers (Leyden jars) connected with the machine. We know that we can take a shock from a machine throwing a spark 7 inches, and yet with the same shock, where more volume (ampèreage) is given, we know that the result would be fatal. There is an induction coil in England that gives a spark of not less than 24 inches; it is estimated that that would destroy life instantly, and it is a dangerous plaything, to say the least.

To use the frictional machine for the death penalty would not be advisable because, even with the best frictional machines produced at the present time it would be impossible at certain seasons of the year, during the summer especially, for weeks at a time, to get a sufficient current to carry out the penalty. I think when we speak of voltage we should have ampèreage. In the arc light the ampèreage is great and we have a voltage comparatively low as compared with the voltage of the static electric machines.

I received at one time a current from 1,140 cells of the gravity (Callaud) battery. It was before the days of electric light in Chicago, except that obtained by the battery, and a gentleman was very anxious to use a lantern he had imported from England, in which the electric current was to be employed; so we worked up in the top story of the Western Union building one evening and had 1,140 of their battery cells connected together. We got an arc light of 3 inches; that is, the carbons of the lamp were separated 3 inches after the light was started, but the light was so faint that you could look at it with the naked eye, and it probably did not give more light than one of the Edison burners here. I accidentally got hold of the two poles. I was shocked two or three times, the muscles contracted very rigidly, and I had some deep burns on my hands for several days, but beyond that no injury was done to me, and I probably received not less than 1,000 volts through my person. If you say a man has taken a thousand volts, you might as well say a man has eaten a mile of sponge cake; well, he could eat a mile of cake if it was cut thin and narrow enough. And so it is with the electric current, there are two dimensions; there is the electromotive force, the power of overcoming resistance; and there is the ampèreage, the quantity of volume. Or, the voltage is velocity, while ampèreage is momentum, that is, it is velocity with mass added to it. Now, a cannon ball may have the same velocity as a musket ball, yet a cannon ball will do many more times the damage that a musket ball will do. The difference is not in the velocity but in the momentum. It seems to me one factor has been omitted in this discussion; ampère-

age has not been taken into consideration in connection with the voltage. Of course, in these electric light machines there is a certain amount of ampèreage, so there will be no difficulty about the criminals being duly executed by the use of any of the instruments that have been suggested in the paper read to-night.

DR. F. C. HORTZ: As physicians we are not interested in killing people, no matter whether it is done in an apparently brutal manner or in a very elegant manner, but we are interested in allaying suffering. Therefore the question that concerns us, is simply whether the criminal suffers during the hanging or during the time that his head is being cut off, or while an electric current is passing through his body, and by which of these methods does he suffer the most. Some of the speakers seem to take it for granted that hanging inflicts a great deal of suffering upon the person. I don't speak from personal experience, but from what I have read in articles written by good observers and gathered from people that had been called back to life after a rope had been strung around their necks, I think this is a wrong impression. What does suffering or pain presuppose? A man can only suffer as long as he is conscious; whenever our consciousness is gone we do not suffer. We all know that when we give a man chloroform we can inflict any amount of injury on his body and he will not feel it; he will not suffer. In putting the rope around the man's neck, as he is executed in this country, and dropping him down so that his weight tightens the rope quickly, often dislocating the neck and acting directly upon the centre of respiration, the arteries supplying the head are so quickly compressed that the arterial supply is cut off. The fact that the pulse is beating in the wrist does not prove that a person during that time is feeling anything. In the half of a second or a second his consciousness is gone and there is no more feeling. In using the guillotine the arterial supply is cut off at once, and if there is anything that will instantly remove consciousness thoroughly and thereby save the criminal any suffering, it is the guillotine, while the electric current, I understand, has to be applied from fifteen to twenty-five seconds. That is taking a long time to kill a man compared with the guillotine or a rope! I think that these recommendations are based upon a wrong foundation; I do not think there is any suffering or any cruelty connected with the act of hanging. The suffering of the criminal is all done before he drops down, physically and mentally. The recommendation that these executions ought to be done privately, without the presence of any one except the jury, etc., and without even the criminal being notified of the exact moment when it is to be done, is all proper and well. But the electric apparatus is no improvement on the present *modus operandi*. It

point was then turned outward and brought out of the incision previously made through the mucous membrane, unthreaded and withdrawn. The ligature was next tied firmly and as deeply as possible. A pair of clamp forceps were passed down and made to catch the tissues on the distal side of the ligature, to prevent the possibility of the ligature being snipped as the tongue was being removed. If necessary, the same was done on the opposite side.

G. O. M.

## LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

### THE PARIS SCHOOL OF MEDICINE—I.

I propose describing as briefly as possible the Paris School of Medicine and the subjects that are taught in it. Those who have not visited this city for the last 15 or 20 years, will scarcely recognize the quarter in which the building of the School of Medicine stands, as the place has become completely transformed. The old building has been considerably enlarged, and fitted up with laboratories for carrying on various researches. The old Hospital des Cliniques which stood opposite has been razed to the ground and the École Pratique has been built on its site. It contains eight pavilions for students carrying on dissection. Each pavilion consists of sixteen tables, and each table supplies room and furnishes material gratuitously to five students.

The degree of Doctor of Medicine in the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government. The first three are Schools of Medicine, the others are mixed Faculties of Medicine and Pharmacy. There are three Écoles de plein exercice, Nantes, Marseilles, and Toulouse. There are preparatory schools at Algiers, Amies, Angers, Besançon, Caen, Clermont-Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, and Tours. The studies necessary for obtaining the degree of M.D. extend practically to about five years. During the first three years the student may attend either one of the Faculties, or an École de plein exercice, or one of the Preparatory Schools of Medicine and Pharmacy. The studies of the fourth year can only be pursued in a Faculty or in an École de plein exercice. Before he begins his curriculum the student must take out sixteen inscriptions, but before doing so he must present the diplomas of Bachelor of Letters and of Sciences. Foreign students, however, are admitted to what is called an equivalence of grade in respect to these preliminary studies, that is, certificates of analogous private studies and of examination of arts elsewhere. The following is the course of study through which the student has to pass: First year: physics, chemistry and nat-

ural history. Second and third years: anatomy and physiology. Fourth year: operative surgery and pathology. Attendance on hospital practice, which is also obligatory, commences after the eighth inscription and continues through the remaining period of study. There are five examinations, the first after the fourth inscription and before the fifth. The subjects of the five examinations are as follows: First examination: physics, chemistry, and natural history, in their application to medicine. Second examination: first part, dissections, anatomy and histology (oral); second part, physiology (oral). Third examination: first part, performance of operations, external pathology, midwifery, and operative surgery (oral); second part, internal pathology, or medicine, and general pathology. Fourth examination: hygiene, forensic medicine, therapeutics, materia medica, and pharmacology. Fifth examination: first part, clinical surgery and obstetrics; second part, clinical medicine and practical demonstrations in pathological anatomy. After the five examinations, the candidate must present a thesis on a subject chosen by himself. This he may pass at any time after having pursued the fifth examination, and must be printed at his own expense. But to entitle him to his diploma he must present a certificate of having passed a curriculum in the hospitals and of having attended them regularly for two years. Candidates for the diploma of Officier de Santé (an inferior grade), must also take out sixteen inscriptions, the regulations regarding which are the same as for the degree of doctor. There are six examinations for this grade. First, in physics, chemistry, natural history, and elementary anatomy (bones and ligaments). Second, in descriptive anatomy and physiology. Third, in medicine and surgery. After the sixteenth inscription, which takes place at the end of the third year, there are three final examinations (examens définitifs). First, in dissection, anatomy, and physiology. Second, in operative surgery, medicine, surgery, therapeutics, and materia medica. Third, in clinical medicine, surgery, and midwifery. No thesis is required. Foreign medical practitioners desirous of permission to practice in France as Officiers de Santé, must present their diplomas to the Secretary of the Faculty of Medicine. If the Council of the Faculty report favorably the permission is granted. Foreign practitioners wishing to obtain the degree of Doctor of Medicine must pass the last two examinations and present a thesis, paying full fees for all the examinations they would have had to pass had they gone through the ordinary course. Exception may be made in the case of medical men of acknowledged eminence, to whom the Faculty may at once grant all the privileges of the doctorate. Foreigners may be admitted to any of the French Faculties on presenting their certificates of study in their own countries and paying

an entrance fee of £4. The total cost of fees for the whole curriculum of medical study, and for the whole series of examinations and the diploma of M.D. of the University (during five years) amounts to 1,360 francs. Officiers de Santé pay 450 francs for their examinations.

The School of Medicine in Paris is open to all who wish to attend the courses and take the degrees. Great facilities are afforded to foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 40 francs is expected from each student. The instruction in the Faculty is given by the following Professors: Drs. Farabeuf, Anatomy; Mathias Duval, Histology; A. Gautier, Medical Chemistry; Baillon, Natural History; Gariel, Medical Physics; Regnauld, Pharmacology; Dieulafoy, Internal Pathology, or Medicine; Duplay, Practical Surgery; Lannelongue, Surgery; Hayem, Materia Medica and Therapeutics; Cornil, Pathological Anatomy; Laboulbène, History of Medicine and Surgery; Tarnier, Midwifery; Proust, Hygiene; Brouardel, Forensic Medicine; Strauss, Comparative and Experimental Pathology; Germain Sée, Potain, Jaccoud, and Peter, Clinical Medicine; Richet, Verneuil, Trelat, and LeFort, Clinical Surgery; Budin (pro tem.), Clinical Midwifery; Grancher, Diseases of Children; Charcot, Diseases of the Nervous System; Panas, Clinical Ophthalmology; Ball, Mental Pathology; Fournier, Diseases of the Skin and Venereal Diseases.

Auxiliary courses are given by Agrégés, or Sub-Professors, on all the above named subjects. Practical instruction is also given under the guidance of Agrégés who are styled Chefs de Travaux and Chefs de Laboratories. The Faculty of Medicine possesses laboratories for the various branches of medical science, and there are also laboratories for practical instruction at several of the hospitals.

A. B.

## DOMESTIC CORRESPONDENCE.

### LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

*Simple, Non-tubercular, Non-metastatic Abscess of the Lungs—Pigmentation of the Body by Arsenic.*

At the last meeting of the Section on Practice of the New York Academy of Medicine, Dr. S. Seabury Jones read a paper on *Simple, Non-tubercular, Non-metastatic Abscess of the Lungs*. This was a subject, he said, which had received but little attention. The affection, however, was comparatively rare, and Trousseau in the first twenty-five years of his hospital practice did not meet with a

single case, though he afterwards reported two cases. Laennec met with only five cases in several hundred autopsies on those who had died of pneumonia. In 1848 Robert Graves reported six cases. When Dr. Jones encountered his first case, now nine years ago, he was unable to find any reference to the subject whatever in any of the text-books to which he had access. Later some attention was given to it in Pepper's System of Medicine; but in von Ziemssen it is referred to only as a sequel of croupous pneumonia. Simple abscess, he thought, would doubtless occur more frequently than it does were it not, as Stokes has pointed out, that the lungs are provided with such an admirable natural system of drainage through the bronchial tubes.

Practically speaking, it is liable to be met with in one of four forms. The first is that in which the symptoms are very obscure from the beginning, and remain so until there suddenly occurs a discharge of purulent matter. In the second form the symptoms resemble those of pleurisy with effusion, and in the third those of pulmonary tuberculosis. The fourth is that associated with the variety of pneumonia which advances slowly from one lobule to another, or is characterized by a tendency to skip from one lung to the other. Dr. Jones said he had personally met with all the forms except the first, but undoubted cases of this variety, occurring in the experience of others, were on record. Abscess of the lungs is always accompanied with a depreciation of the general health, and alcoholism is apparently a prominent factor in its production. It is an affection confined to no particular age, and Dr. L. Emmett Holt, of New York, has reported in the *Medical Record* a case that occurred in an infant only 3 months old.

Dr. Jones' first case was in a young man 17 years of age, of rather delicate health, and affected with lateral curvature of the spine, who came under observation September 25, 1879. While in his usual health he was attacked with severe pain in the left side, accompanied with cough, but no expectoration. At the time he was seen the pulse was 120, and the temperature 102°. Anteriorly there were no abnormal physical signs, but posteriorly, in the subscapular region on the left side, there was complete dulness on percussion, although no râles whatever could be found, and there was still no expectoration. About October 1 a large abscess of the tonsil developed, from which pus discharged freely, and subsequently there was a discharge of purulent matter from the lungs through the mouth. After this the patient made a rapid recovery, and had no further trouble subsequently. He was led to consider this as a case of simple abscess of the lungs, *first*, on account of the short time intervening between the appearance of the first symptoms and the discharge of pus; *secondly*, on account of the occurrence of the tonsillar abscess, showing a tendency

pear to be no special difficulties in learning to read Volapük, nor in acquiring the ability to speak it.

Professor Henry Cohn, Director of the Chicago School of Languages, informs us that this is the most complete and the most conveniently arranged dictionary of Volapük published in any language.

**TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY.** By JOHN J. REESE, M.D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. Second Edition. Revised and Enlarged. Philadelphia: P. Blakiston, Son & Co. 1889.

The first edition of this valuable and convenient work has become well-known to the profession, and consequently needs no extended notice. In this second edition the author has added valuable matter regarding Blood Stains, Suffocation, Ptomaines and Malpractice, and revised the text generally. It is well adapted as a text-book for students of both law and medicine.

**TRANSACTIONS OF THE THIRTY-EIGHTH ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY,** held in Rock Island, May 15, 16, and 17, 1888. 8vo, pp. xii, 220. Chicago: Jameson & Morse Company.

We must first apologize to the Illinois State Medical Society for having allowed its volume of Transactions to be so long unnoticed in *THE JOURNAL*; the volume appeared in September.

A large portion of this volume is devoted to the reports of committees on the progress made in the various departments and branches of medicine during the year. May it not be said that the day, when such reports are useful or in any way necessary, is past? The custom of having these reports was inaugurated in the Illinois State Medical Society 38 years ago. "Then," as Dr. A. Reeves Jackson remarks in his report on gynecology, "a doctor could wait for his quarterly installment of literary food without feeling any lack of nutrition. . . . Then came the monthly. . . . But now the quarterlies are changing to monthlies, the monthlies to weeklies, and every physician is a subscriber. . . . So that these yearly reports, which may at the first have been a welcomed offering to those who had not always the opportunity of obtaining otherwise the facts which they might contain, have come to be less and less useful."

The volume closes with a volunteer paper by Dr. E. Fletcher Ingals on "Chronic Rheumatic Laryngitis or Chronic Rheumatic Sore Throat," which has been published elsewhere; one by Dr. J. W. Cowden, of Rock Island, on "The External Application of Sulphur in Sciatic Neuralgia," which has been published in *THE*

*JOURNAL* (Vol. xi, p. 13), and one by Dr. David Prince, of Jacksonville, on "The Possibilities of Volapük for a Universal Language in Relation to Medical Science."

**THE YEAR-BOOK OF TREATMENT FOR 1889.** Being a Critical Review of the Practice of Medicine and Surgery during 1888. 8vo, pp. viii, 344. Philadelphia: Lea Brothers & Co. Chicago: A. C. McClurg & Co.

In this book is furnished not only an account of the more important advances made in the treatment of disease, but also a review of these advances by competent authorities. The contributions include abstracts and excerpts from the medical literature of all countries for the year ending September 30, 1888. The list of editors includes some of the best-known men in the profession in England. The volume is very conveniently arranged, and the contents make it a most admirable book for any physician.

**DEPARTMENT OF AGRICULTURE.** Report of 1887. Swine-plague and Cholera critically considered. By FRANK S. BILLINGS, Director of the Patho-Biological Laboratory of the State University of Nebraska. Pamphlet, pp. 64. Lincoln, Neb. State Journal Company. 1889.

This is a "review" of Mr. D. E. Salmon's report on Swine-plague and Cholera, made to the Department of Agriculture in 1887. Dr. Billings says in his preface: "The absolute necessity of forcing this dispute to a final issue must be my excuse for this contribution." What the dispute is, we have failed to discover from the 64 pages of the pamphlet. It is absolutely painful to read anything written with so little dignity of style as this pamphlet, especially when it emanates from a member of the medical profession occupying a public position. The pamphlet is not argumentative; it is abusive, rhetorically involved, and unclear in diction and style. The author claims in his preface to be the devoted servant of his profession, the live stock interests of his country, and his race in all countries. With these masters to serve we think he could spend his time to better advantage than in writing pamphlets of this nature.

## MISCELLANY.

**MICHIGAN STATE MEDICAL SOCIETY,** *Twenty-fourth Annual Meeting*, to be held at Kalamazoo, Michigan, May 9th and 10th, 1889. Much satisfaction is felt in announcing that the membership of the Society is rapidly growing, that added interest in its work is displayed from year to year, and that the regular attendance upon its meetings is constantly increasing. Its members, actuated



by a truly scientific spirit, are working together harmoniously to further the welfare of the Society. The division into Sections for the reading and discussion of papers has greatly facilitated its work. Ours is the first State Society to adopt this plan. Stenographers have been furnished each Section, and verbatim reports of discussions taken. The recent volumes of *Transactions* tell of the gratifying amount of work accomplished. A similar arrangement will be carried out at the next meeting. Mornings will be devoted to the general business meetings of the Society, afternoons to work in the Sections. In addition to the Annual Address of the President, others are promised from the Orators of Sections, as follows:

*Upon Practice of Medicine.*—Henry F. Lyster, M.D., Detroit. Subject: "The Influence of Mind in the Cure of Disease."

*Upon Surgery.*—Herman Keifer, M.D., Detroit. Subject: "Surgery within the last Fifty Years."

*Upon Obstetrics and Gynecology.*—E. W. Jenks, M.D., Detroit. Subject: "The Education of Girls from a Medical Standpoint."

Committees of the different Sections urgently desire that members further the work of the Society by contributing brief papers. Those presented must be fully completed, that the publication of the *Transactions* may not be retarded. Complete abstracts and titles should reach the Secretaries of the Sections not later than April 20th, to insure notice in the official programme.

Railroad certificates for reduced fare will be sent to all physicians, other than members, who desire them, on application to the Secretary.

The Headquarters of the Society will be at the Burdick House, Kalamazoo. All sessions of the Society will be held in the first Presbyterian Church, corner of Second and South streets.

The officers of the Society earnestly solicit the cooperation of all members, to the end that the next Kalamazoo may prove the largest and most successful in the history of the Society.

*Secretaries of Sections.*—Practice of Medicine: H. B. Hemenway, M.D., 524 South Park St., Kalamazoo. Surgery: F. W. Mann, M.D., 250 West Fort St., Detroit. Obstetrics and Gynecology: C. Henri Leonard, M.D., 18 John R. St., Detroit.

To be elected to membership necessitates being present.  
S. S. FRENCH, M.D., President,  
Battle Creek.

GEO. DUFFIELD, M.D., Secretary,  
25 Washington Ave., Detroit.

DR. PASCHAL MAXFIELD, the oldest physician in Vergennes, Vermont, died recently, aged 76. He was highly esteemed for his generous character, and held many important offices in the gift of the town and State. He was a graduate of Castleton Medical College.

AN AMERICAN HOSPITAL is one of the features of the City of Mexico. All English-speaking persons that apply are admitted. Regular contributors to the Hospital, who subscribe not less than \$1 monthly, and Americans without means of support, are entitled to attendance and medical treatment in the general ward, free of all charge. Other persons may enjoy the privileges of the Hospital on equitable terms, and private rooms are provided for such as desire them.

**HISTORY OF THE MEDICAL PROFESSION IN CANADA.**—The descendants of the early doctors of Upper Canada will be interested to learn that there is being prepared an historical account of those pioneer practitioners, by Dr. Canniff, of Toronto, the author of "The Settlement of Upper Canada." The work will give an account of the several steps in legislation to secure a proper standing of the profession from the establishment of the Province of Upper Canada up to about the year 1850; 2d, an account of the proceedings of the Upper Canada Medical Board; 3d, a list of the medical men during that period, with bi-

ographical sketches. Dr. Canniff requests veteran medical men to kindly furnish him at once with information on the following points: 1, birthplace and date; 2, place of medical study and the degrees; 3, time of arrival in Canada; 4, places where he practiced; 5, incidents in his professional life; 6, marriage, children, and death.

**CHICAGO POLICLINIC.**—Dr. W. A. D. Montgomery has been elected Professor of Diseases of Children; Dr. M. L. Harris, Professor of Surgery; and Dr. Henry Hooper, Professor of Gynecology.

**MEDICAL GRADUATES.**—Following are the numbers of graduates from schools that have recently closed the session of 1888-89: Baltimore Medical College, 21; Starling Medical College, 28; University of Nashville and Vanderbilt University, 98.

**MEDICAL EDUCATION.**—At the annual meeting of the Board of Trustees of the Central College of Physicians and Surgeons of Indianapolis, held March 1, 1889, the following resolution which had previously been passed by the stockholders and faculty, received the unanimous vote of the members:

"That after the session of 1890 and 1891, the Central College of Physicians, and surgeons require of each student who is a candidate for graduation, evidence of four years' study of medicine, and the attendance of three courses of lectures."

**THE ANNISTON CITY (ALA.) MEDICAL SOCIETY** met and organized on February 23, with Dr. H. Mabbett as President, and Dr. Bowcock as Secretary.

**PROPOSED HOSPITAL FOR INEBRIATES IN MASSACHUSETTS.**—A bill has been introduced into the Massachusetts Legislature providing for the establishment of a hospital for inebriates. This indicates a new development of knowledge and experience in regard to the treatment of habitual drunkards. Dipsomania is now distinctly recognized as a disease. The patient may have been culpable in inducing it; but, when it is once acquired, it cannot be expelled without the proper treatment. This treatment must be based on sound medical and moral principles. The fact that dipsomania is a disease is already conceded in the laws of the State which provide for the commitment of such persons to the insane asylums. But experience has shown that, while the law is right in recognizing the disease, its disposition of the victim is not fortunate or adequate. A large amount of testimony can easily be gathered from superintendents of insane hospitals to show that such institutions are not proper places for the commitment of dipsomaniacs or habitual drunkards. At the end of a few weeks, when the paroxysm of inebriety has passed away, the patient is apparently well. He is at least no longer insane in any proper sense. It is not difficult to procure an early discharge; and the patient goes forth only to renew his debauch at the usual interval, and is perhaps recommitted to the asylum. What he really needs is to be treated, not for insanity, but for drunkenness. The methods of treatment are not identical. An habitual drunkard needs to be restrained long enough to establish the physiological changes necessary to a permanent cure. He needs also to be brought under the constant pressure of moral influences which shall develop and strengthen the power of self-control.

Nor is a prison any more than the insane asylum the proper place to commit habitual drunkards who are not criminals. The drunkard who commits a crime against society while under the influence of liquor becomes amenable to the criminal law. The drunkard who has not in other respects a bad repute, but yields to the dominion of this form of self-indulgence, belongs to a different class. In both cases the aim of society should

be the same—the reformation of the victim. But the proper classification may lead to a distinction between them. The time will come, we trust, when all prisons will be regarded as moral hospitals. But that time has not yet arrived. A prison is still popularly regarded as a place for the infliction of punishment. Incarceration carries with it the stigma of criminality. There are those who feel that the drunkard or the opium-eater, who is simply guilty of a sin against himself, should not be placed in prison with those who are guilty of sins against society. We do not think this reasoning should be pushed too far. We believe that every man who yields to self indulgence violates not merely his obligations to himself, but obligations to society and posterity. And it may be shown that the drunkard who bequeaths the terrible consequences of his indulgence to his children has done vastly more harm by his life in the world than the man who steals a few dollars from his neighbor and is branded as a thief.

It is not necessary here, however, to press points of casuistry. We simply urge that this matter be approached in a practical way. It is a simple fact that a large percentage of inebriates may be cured if placed under proper conditions. These facts are amply supported by the testimony of medical men and of experienced temperance workers. It is further reinforced by the statistics of the most successful private inebriate asylums. But such asylums are not available to many of the poor, nor can they command those conditions which may be provided by State Institutions. The difficulty in private institutions is that the patient wishes to decide for himself when his cure is completed. His judgment does not agree with the judgment of his physician, but the latter has no power to restrain him. The bill before the Massachusetts Legislature grants a power of restraint over the patient extending to 2 years. It provides for the commitment of the inebriate under proper legal form and on sufficient medical evidence. It also protects the inmate against the possibility of unjust detention; and, should it become a law, as we trust it may, those inebriates who are now sent to insane asylums and many that are sent to reformatories would be committed to its care. The bill has been carefully drawn by medical and legal experts, and Massachusetts now has an opportunity of trying an experiment which ought not to be longer delayed. Every step in the classification of disease and crime is a step in advance. The new institution, if established according to this bill, will not be a prison or an asylum—it will be a hospital. Here the patient may be surrounded by every needed influence, physical and moral, until he has outgrown the disease which has mastered him.—*St. Louis Globe-Democrat.*

#### LETTERS RECEIVED.

F. P. Allen, S. H. Gardner, J. H. Frey, University of Virginia; Orion K. Thompson, Greenburg, Ind.; A. G. Patton, Cherry Fork, O.; Dr. E. A. Christian, Pontiac, Mich.; Dr. Kent K. Wheelock, Fort Wayne, Ind.; Dr. C. A. Rogers, Bakersfield, Cal.; Dr. A. L. Hummel, Philadelphia; Dr. A. F. A. King, Dr. H. H. Barker, Washington, D. C.; Dr. John S. Lewis, Dubuque, Ia.; Newport Aluminum & Steel Co., Newport, Ky.; J. S. Winters, Louisville, Ky.; E. M. Thomas Mfg. Co., New York; Dr. H. T. Montgomery, South Bend, Ind.; J. C. Cochran, Burlington, Vt.; Dr. R. J. Dunglison, Philadelphia; Dr. M. J. Dudley, Sonoraville, Ga.; Dr. J. A. Irwin, Philadelphia, Pa.; Dr. D. DuPre, Dallas, Tex.; Dr. C. A. Freeman, Leland, Ill.; Jerome Kidder Mfg. Co., New York; Dr. C. H. Bradley, Haverhill, Mass.; W. A. Caldwell, Washington, D. C.; Reed & Carnrick, New York; Dr. Wm. C. Woodward, Washington, D. C.; Dr. F. E. Young, Canton, O.; Dr. A. A. Hoehling, U. S. Navy; W. S. Mobbitt, Louisville, Ky.; Henry Bernd & Co., St. Louis, Mo.; Dr. T. E. McArdle, Washington, D. C.; Dr. N. Senn, Milwaukee, Wis.; New York & Chicago Chem-

ical Co., New York; J. F. Widman, McGregor, Ia. Eagon, New York; St. Hilde's School, Morristown Walters Bros., Des Moines, Ia.; S. A. Majure, Hi Miss.; Adda Dixon, Omaha, Neb.; W. A. Lee, Cl Ill.; Dr. J. S. Marshall, Green Spring, O.; Dr. Thompson, St. Paul, Minn.; Chicago Polyclinic H. A. Kelso, Paxton, Ill.; Dr. J. R. Kewley, C Cincinnati Polyclinic; Dr. H. Longstreet Taylor, nati; Dr. E. R. Smith, Toledo, Ia.; Dr. S. Solis Philadelphia; Dr. H. R. Storer, Newport, R. I.; Publishing House, Chicago; H. Weinhausen, New Thos. F. Goode, Buffalo Lithia Springs, Va.; Dr. J. Lange, Pittsburgh, Pa.; J. H. Johnson, Burghwash, Dr. E. R. Fletcher, St. Paul, Neb.; Subscription New Chicago; McIntire & Ashby, Baltimore, Md.; Dr. hering, New York; Dr. Geo. Duffield, Detroit, Mich Wm. Osler, Philadelphia; Dr. G. A. Ritchie, Ma Wis.; M. G. Conger, Cincinnati, O.; Medical Libra sation, New Orleans, La.; Heap's Patent Earth Co., Muskegon, Mich.; Dr. G. C. Smythe, Green Ind.; Eastman Dry Plate & Film Co., Rochester, O. W. McMichael, Buffalo, N. Y.; Dr. H. J. Wood, B lyn, N. Y.; Dr. G. F. Cook, Oxford, O.; Adams Ne Asylum, Jamaica Plains, Mass.; Dr. Louis A. Kengle Francisco, Cal.; Dr. Benno Schwabe, Basle, Switzer Otto Maier, New York; V. J. Stearns, J. P. Olsen, Clayson, M. A. Cachot, San Francisco, Cal.; John A. rett Battery Co., Baltimore, Md.; Dr. J. H. Goss, Lamar, Ga.; R. C. Boyle, Winnipeg, Man.; Ella C Clarence, Ia.; J. H. Bates, New York; Health Resto Co., New York; Woman's Medical College, King Canada; Dr. E. P. Brewer, Norwich, Conn.; E. B. O Chicago; Dr. R. Harvey Reed, Mansfield, O.; Ed Gros, San Francisco, Cal.; Dr. J. C. Reeve, Dayton Dr. G. E. Dixon, New York.

#### *Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from March 9, 1889, to March 15, 1889.*

By direction of the Secretary of War, Col. Jedediah Baxter, chief Medical Purveyor, will proceed to New York City on public business connected with the Medical Department, and on completion thereof return to his station in this city. Par. 18, S. O. 57, A. G. Washington, March 11, 1889.

Major Charles R. Greenleaf, Surgeon U. S. Army, is appointed member of board to meet in this city on March 11, 1889, for the purpose of revising the blank forms now in use in the Army, and preparing the "Book Forms" for issue. Par. 13, S. O. 55, A. G. O., Washington, March 8, 1889.

By direction of the Secretary of War, Capt. Richard Johnson, Asst. Surgeon, is relieved from duty at San Carlos, Ariz., and will report in person to the commanding officer, Whipple Bks., Ariz., for duty at that station. Par. 15, S. O. 57, A. G. O., Washington, March 11, 1889.

By direction of the Secretary of War, Capt. Robert Shufeldt, Asst. Surgeon, having been found incapacitated for active service by an Army Retiring Board, is granted leave of absence until further orders on account of disability. Par. 7, S. O. 56, A. G. O., Washington, March 9, 1889.

#### *Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending March 16, 1889.*

Asst. Surgeon Frederick A. Hesler, detached from Naval Hospital, New York, and ordered for examination preliminary to promotion.  
Asst. Surgeon Frederick N. Ogden, ordered to receive ship "St. Louis," Navy Yard, League Island.  
Asst. Surgeon Patrick H. Bryant, detached from receiving ship "St. Louis" and to the Naval Hospital, Chelsea, Mass.

